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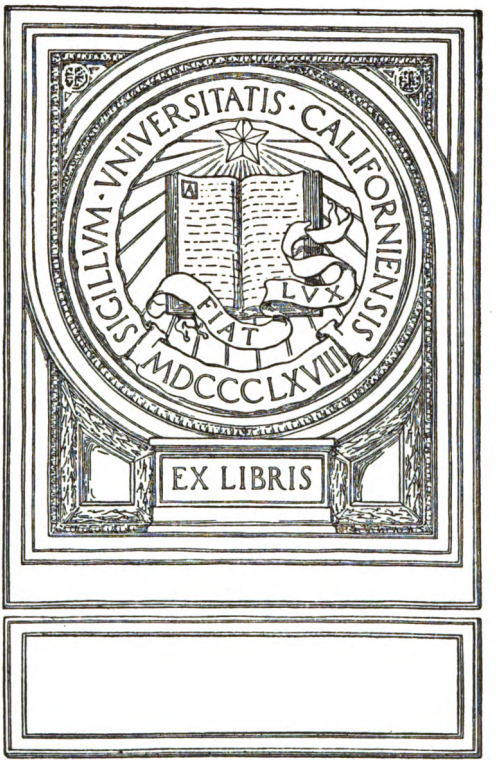

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SIMPLIFIED

BY

CAPTAIN B. H. LIDDELL HART

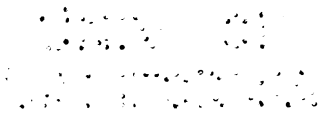
WITH A FOREWORD

BY

GENERAL SIR IVOR MAXSE
K.C.B., C.V.O., D.S.O.

THIRD REVISED AND ENLARGED EDITION

Founded on Lectures given by the author at the Royal United Service Institution, and Institution of Royal Engineers, in 1920



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officer or N.C.O., by writing the manual in clear, definite, and illustrative language. For clearness, the personal "You will do this" was substituted for the vaguer "It will be done." For definiteness, the innumerable reservations which wrap round the teaching as in a cloud of mist, were cut out from the text itself, after a preliminary emphasis on the fact that conditions always vary in degree and hence that the action suggested in the body of the manual must be adapted to the conditions of each case. To make the doctrine easier to grasp, and to form a mental picture of its essential features, the writer inserted metaphors or word-pictures, often based on the analogy of personal combat, as a literary form of the now well-known method of teaching by demonstration.

But when "Infantry Training," 1921, finally appeared, after running the official gauntlet, the word-pictures and the personal pronouns were cut out as unorthodox, and a luxuriant crop of reservations had sprouted throughout its pages—to befog the mind of the reader. The reason given was that the manual as originally written was not in "General Staff language." When it was pointed out that "Infantry Training" was essentially for the junior Regular officer or N.C.O., for the Territorial or future New Armies, and not for the instruction of the General Staff, the force of this argument, apparently new to authority, was admitted. But it was then too late to change.

Further, the manual as it eventually appeared proved again the old saw that "too many cooks spoil the broth." New paragraphs had been inserted haphazard, or others altered in such a way as to produce obvious contradictions or breaches of sequence. To give but one of the more notable examples, the present writer had reduced the many

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pre-war pages on "Outposts" to two or three, simply showing the difference between ordinary defence and outposts, the keynote being that outposts are simply a temporary form of defence and not a watertight compartment of infantry tactics. This drastic reduction of verbiage so disturbed the official mind that, in default of any improvement of their own, they re-inserted the whole 1911 chapter word for word. The consequence was such obvious and flagrant contradictions of our post-war teaching as that sentry groups were to consist of three to eight men instead of a complete section, and that the supports were to reinforce the piquet. Fortunately common sense prevailed, and in the 1922 amendments the chapter was recast, if not reduced. The contradictions were removed, it was pointed out that outposts were a temporary form of defence, and though authority flinched at the idea of cutting out the obsolete and confusing system of sentry groups, piquets, supports, and reserves, they reconciled their sense of tradition with common sense by making it optional, and emphasising that there was no need to adopt this system. "Infantry Training," 1926, confirms this progress, if it still shrinks from the full measure of change.

Returning to the origins of this book—when the draft of "Infantry Training" was launched on its hazardous passage through the War Office and Staff College, the author incorporated the main ideas in a lecture for the Royal United Service Institution, taking the opportunity to build the doctrine on a simpler and more scientific framework, which the time-honoured scheme of arrangement in official manuals had not permitted in "Infantry Training." In this framework one endeavoured to make the principles a practical

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guide instead of empty phrases to which everybody paid lip-service but nobody applied.

Then, as "Infantry Training" was slow to make its appearance—actually its issue was a full year from the delivery of the draft volume—and officers meanwhile had no post-war guide on which to base their training, the author was urged to publish the lecture as a booklet. Published in May, 1921, it was issued throughout the Northern Command and also by several higher formations at home and in India. When this edition was exhausted "Infantry Training" had at last appeared, and while most of the original ideas were retained, their outlines were blurred, and the expression of the doctrine so vague and occasionally contradictory, that many officers fell back on the unofficial "forecast" of the doctrine. Thus, since there still appeared room for a textbook which would supplement the official manual, and illustrate in more natural and perhaps more simple language its vaguer passages, the author decided to revise and enlarge the original booklet. A further object of this second edition was to lay fresh emphasis on some of the ideas which had been blurred or partially deleted in the manual as issued—for example, the "expanding torrent," outposts as a temporary form of defence, and the nomenclature of the different bodies.

This second edition has in turn been sold out, and with the appearance of "Infantry Training," 1926, which incorporates most of the ideas so long advocated and striven for, there might be ground for raising a "Nunc dimittis." But apart from the continued demand for the book from Regular and Territorial officers engaged in training or preparing for promotion examinations, there is a further reason for its continuance. Even though

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practically all the tactical methods and ideas are now adopted in the official manual, the present book possesses an independent justification. It is built on a connected framework of principles, instead of being broken up into the compartments to which custom compels the official manual to adhere. Thus the principles instead of being mere abstract phrases can be used as practical guides in solving any tactical question or problem, and because of this the book, it is hoped, will still form a helpful supplement and "illuminator" to "Infantry Training."

The Revisions made in the Third Edition

Apart from an increase in the "meat," or explanation, clothing the bones of the framework, the revisions comprise a modification in the framework, and a slight change in nomenclature, which is explained in a separate note, to bring it into line with the reform in the official manual.

The author has been led to revise the framework, to attempt to make it fuller and yet simpler, by the experience of the Regular and Territorial training of the last two years, when it has been his lot to watch the work of scores of units throughout the country. Amongst the many good points certain defective points have appeared so often as to suggest a general need of studying their antidotes, and of emphasising the latter in any framework of principles. Taking them in sequence, the first is that objectives are often chosen arbitrarily rather than on a reasoned calculation; the second, that direction is often lost, even in those exercises where the fog of battle is absent; the third, that co-operation is not so effective as it might be, and the importance of keeping touch insufficiently

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stressed; the fourth, that infantry mobility has not fully thrown off the "stickiness" bred by trench-warfare; the fifth, that the exploitation of local success is rather neglected, and, complementary to this, that infantry commanders do not make effective use of their battalion or company reserves. Before 1914 these were used to reinforce the firing line, and now that this is contrary to our doctrine they often fail to use them at all unless there is room for a wide outflanking manœuvre. These omissions, both separately and together, mean that commanders do not always expend their force to the fullest economic advantage, *i.e.* profit to their superior's plan.

Reflection on these points has led the writer to revise the framework as it now stands. To exalt "economy of force" as the supreme law, embracing all the other principles, and show how these are each derived from, and contribute to, it. To emphasise that "mobility" is not only fused in the principles of "security" and "surprise," but must link and control them. To give "direction" and "co-operation" an equal prominence in the reader's mind as had "formation," "information," etc., already. Thus we can crystallise our mental framework for infantry tactics into one law, three governing principles, and seven practical means through which they can be applied (see Plate 1). In addition, to avoid any confusion, a clearer distinction has been made between the essential principles and the essential phases of combat.

The principles in the framework, if somewhat different in form, are similar in sense to those listed at the beginning of "Field Service Regulations." It may be asked why I have not made my framework conform exactly to this list. The answer is two-fold. The principles in "Field Service Regulations"

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were drawn up in 1919 by Colonel J. F. C. Fuller (now Military Assistant to the Chief of the Imperial General Staff), and since then, as a result of extended reflection and discussion, he has considerably modified and enlarged his own table of principles. To adopt a list abandoned by the author of it would be absurd. After several years of further study and thought Colonel Fuller has now produced his new synthesis of principles, to which prolonged discussions between us have contributed in some small degree, and to this synthesis I fully subscribe. But it embraces the whole of war, not merely the lower scale of battle tactics. For this reason, after consultation with regimental officers of experience, I have decided to adopt instead, in this book, my own revised framework, as perhaps simpler to grasp and of more direct applicatory value for infantry tactics.

Finally, it should be understood that, except for Part I., this book deals with pure infantry tactics. The proportionate values and strength of the other arms and their relationship to the action of infantry are, in all armies, for the present in a state of flux. It is generally agreed that infantry units should not be fettered by having to adapt their formations rigidly to the movements of tanks or artillery barrages; that if they are thus restricted they lose both their initiative and special value in battle. In its broad aspect the co-operation of infantry with these arms consists of taking instant advantage of all opportunities provided by the action of tanks, artillery, aircraft, in order to destroy and clear away from their path the enemy infantry. The present methods of communication and co-operation with these arms are expounded in thorough detail in "Infantry Training," 1926, to which this book is essentially a supplement.

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Further, they are so subject to change that it is advisable not to include them in a book which deals mainly with principles and methods fundamental to infantry armed with small calibre fire weapons, and which are not likely to be altered radically unless infantry should in course of time be armed with a chemical squirt or ray projector —or be abolished altogether.

It is probable that infantry will eventually be absorbed into tank forces. This at any rate is the view of the French authorities, as expressed by the late General Buat, post-war Chief of the General Staff—a view developed even earlier and more explicitly in this country by that brilliant military thinker, Colonel Fuller.

But until this eventuality comes to pass and so long as infantry exist in their present form, it is surely essential that their tactics should have a scientific basis drawn from the fundamental principles of combat, rather than fluctuate according to the changing currents of opinion dictated by the whims, notions, and partial experiences of the moment.

This book, therefore, is a humble attempt to build a science of infantry tactics upon the foundational principles which govern all fighting.

In conclusion, the author would emphasise that the methods and solutions he has drawn from the principles are intended merely to fit the general nature of existing weapons and conditions, and to be adapted where necessary to local and psychological conditions.

Between such a flexible framework and a rigid system there is the same difference as between the skeleton, or bony framework, of a man and the complete man clothed in flesh and blood. The conditions of life are such that

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hardly any two men resemble each other, yet at the same time every man's skeleton is composed of bones which correspond in number, position, and relative function. Although no two situations in war are exactly alike, there is an underlying similarity, particularly for the infantry units, in respect of the forms and phases of action.

Nor are the author's deductions in any way intended to be dogmatic. Any apparent terseness in stating them is solely for the sake of brevity, and the reader is asked to forgive the absence of repeated qualifying remarks in the body of the book.

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AUTHOR'S NOTE ON CERTAIN MILITARY TERMS

To simplify the understanding of tactics, it is advisable to use a terminology which conveys exactly the rôles of the various parts of a force or unit.

For this reason, when writing "Infantry Training," 1921, the author invented the terms *forward body* to replace "firing line," and *manœuvre body* to replace "supports." His reason for the first was that the old term "firing line" suggested a linear formation, rigid and continuous, instead of a dispersed series of little fighting groups, such as the forward sections form under our post-war doctrine. As for the second, the term *manœuvre body* inculcates the essential idea of manœuvre, whereas "support" suggests the obsolete and disastrous idea of direct reinforcement of troops who are held up. He argued that so long as obsolete names were retained there was a danger of the obsolete method lingering in the mind of the average leader.

Whether we are dealing with an army, a division, or a company, there are only two distinct tactical functions: that of the outstretched arm which feels for and fixes the enemy, and that of decisive manœuvre and its exploitation. The terms "forward body" and "manœuvre body" appeared to suggest and distinguish effectively the two bodies which carry out these functions.

When "Infantry Training," 1921, was issued, the term "forward body" was approved and

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adopted. But "manœuvre body" was rejected as too novel, although it became in current use among a large part of the army, who apparently preferred right sense to custom.

The 1922 amendments to "Infantry Training" made confusion worse confounded, speaking of the supports of a company or platoon, the local reserve of a battalion, the reserve of a brigade, and the Reserve of a higher formation. Even "forward body" was varied with "advanced troops" and other terms. In fact, no less than seventeen different terms were employed for the two tactical parts into which every unit is divided.

Therefore, in the second edition of this book the author retained the two terms "forward" and "manœuvre," not in opposition to the official ones, but simply because simple and lucid explanation was impossible with such a multiplicity of names.

Since, however, the then Chief of the Imperial General Staff finally decided against the name "manœuvre body," the author has constantly advocated that the sole term "reserve" should be standardised throughout the whole scale of command—for the company and platoon, as well as for the battalion or higher formation. One's conviction of the need for this simplification was strengthened by experience of the training during the last two years, where one found an indiscriminate use of the terms "support" and "reserve," with the result that higher commanders often made their instructions confusing to their subordinates, and that platoon commanders divided their handful of men into three bodies—forward, support, and reserve, in unintentional but direct contradiction to the official doctrine.

At last, however, this advocacy has been successful, and in "Infantry Training," 1926, the

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term " support " disappears and " reserve " is used uniformly, *i.e.* battalion reserve, company reserve, platoon reserve. Having brought about this reform and simplification, the author has accordingly abandoned his own original term " manœuvre body " and brought this book's nomenclature into line with the revised manual.

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PART I

THE FRAMEWORK OF A SCIENCE OF INFANTRY TACTICS

CHAPTER I

THE NEED FOR A FRAMEWORK OF PRINCIPLES

A CONCLUSION forced upon an observer of the training of many different units is that a majority of the faults are due to a failure to understand, and so to apply, the principles. The result is that unless the individual commander has had the opportunity of wide study and experience, his plans and decisions are apt to be the product of custom rather than of reasoned judgment, reminiscent indeed of Marshal Saxe's pungent criticism that " our practice is nothing more than a passive compliance with received customs, to the grounds of which we are absolute strangers."

Yet there is no term in such frequent use among soldiers as " principles "—the trouble arises from a looseness of language and thought, that is perhaps a national characteristic, so that mere precepts, rough generalisations, and even concrete methods framed to meet certain changeable types of condition, are constantly called principles. The author has even heard a distinguished general, himself a most capable tactician, address a conference of Territorial officers on the importance of learning to apply the principles of tactics in their solution

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of tactical problems, and then finish by telling them that "these fundamental principles are five in number, Attack, Defence, Outposts, Advanced Guards, and Rear Guards"!

When even the preceptors are so hazy, confusing concrete acts with principles, which are essentially abstract governing truths, can it be wondered that ordinary officers tend to base their plans on the shifting sands of conjecture and custom instead of on a logical bedrock?

Alike in the development of our military organisation to meet future emergencies, and in the immediate realm of tactical schemes, the paramount need is for a compass or test-tube of military thought by which we can test and value the various hypotheses. Since the war of 1914–1918 there has been a general awakening to the fact that, as Marshal Saxe pointed out two centuries ago, "All other sciences are established on fixed principles, while this alone remains destitute," and a spontaneous effort has been made to discover what are the unchanging truths whose fulfilment leads to success, so that we can establish a compass to guide our military thought and plans.

As one result of this movement the 1920 "Field Service Regulations" attempted, for the first time, to define the principles of war, listing eight—Maintenance of the Objective, Offensive Action, Surprise, Concentration, Economy of Force, Security, Mobility, Co-operation. Yet in practice it is still found that at tactical exercises and conferences this list is rarely referred to, and the value of criticising solutions in the light of these principles is generally overlooked.

This neglect may be partly due to our national distrust of logical reasoning, so apparent in political democracy to-day. But another cause, more ex-

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cusable, may be that in "Field Service Regulations" these eight principles are merely catalogued, with no attempt to define their relationship or values.

Now the normal officer can no more be expected to weigh eight separate and unrelated principles in his mind when making his plan, than the normal man to emulate the juggler in keeping eight balls in the air simultaneously. To balance two or three balls or ideas is the most that is feasible, and even this requires training and practice.

In order, therefore, to make the principles a practical help, the need is to classify and group them; to make, first, an analysis and then a synthesis, so that the junior commander will only have to weigh groups of two or three principles in his mind at a time.

This, the author has attempted to do. The student of "Field Service Regulations" will see Economy of Force standing out as the source and fulfilment of all the other principles; he will recognise Security, Mobility, and Surprise, established as the abstract principles governing each of the three classes of action—guarding, hitting, and moving. The Offensive he will not see because from a tactical point of view it is a class of action—hitting, and Surprise in its full sense covers the offensive, since it is the form of hitting which fulfils economy of force.

He will also recognise Concentration, established along with Speed and Concealment as one of the practical means to Surprise. Similarly, Co-operation is shown to be one of the practical means to Security, along with Formation and Information, and to Mobility, along with Speed and Direction. Under the latter term is included the Field Service Regulations principle, Maintenance of the Objective, since the latter is but half a principle, for

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surely the right choice of the Objective is as vital to success as its maintenance ?

Thus in place of the mental jugglery of balancing eight distinct principles, we are able to enlarge them and yet make them easier to weigh and apply. This co-ordination of the principles will help not only to establish their relationship and respective values, but will bridge the gap that at present exists between the opening section in "Field Service Regulations" and the body of the manuals. It will enable us to realise when reading the detailed prescriptions how each is, or should be, based on a valuation of the principles to meet the particular case. In a manual composed of methods only there is a real danger of formalism and rigidness, but to build them on a framework of principles avoids this danger—because principles are not concrete acts, but governing truths, elastic in application.

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CHAPTER II

THE DEDUCTION OF THE FRAMEWORK OF PRINCIPLES

"SIMPLICITY is the key to victory." This vital truth has scarcely been fully valued in the tactical teaching of the infantry leader. Too many text-books on tactics have dealt with war in a series of watertight compartments, explaining the points of difference rather than the points of similarity. The junior Infantry commander was taught many excellent precepts dealing with each phase of action, but his path was not smoothed for him by any framework of fundamental principles, upon which he could build as he acquired practical experience of ground and weapons. To simplify the task of the junior commander would it not be better to establish the essential principles of tactics and their relation to the varying phases of battle? If we then fit them into their correct place, both in chronological and tactical sequence, we may be able to form a simple and truly scientific theory.

The family tree is an ancient institution and yet graphically clear as a chart of the various degrees of kinship. Let us endeavour to establish a simple and scientific tactical tree which will clearly convey to the military student the essential principles and their broad application to the phases of war. To understand these principles of tactics we must simplify and reduce it to the essential elements which are true of any fighting whether between two individual men, two platoons, or two armies.

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Therefore examine the simplest form of combat, that between two individuals. From their correct course of action, we can deduce the essential principles, and can then apply them to the conduct of war.

Let us analyse such a fight and reduce it to its constituent elements in order to find the essential principles which govern the tactics of the individual.

His whole action can be simplified into two categories: Guarding and Hitting, both of which depend on the movement of his muscles and limbs. Movement may thus be considered as a central pole or axis round which revolve the contrasting acts of guarding and hitting. The man has to guard against the direct danger of injury or premature exhaustion from the enemy's blows. He obtains this security by *watching* his opponent, by *maintaining a posture of readiness* to parry a hostile blow, and by the promptness with which his muscles respond to, or *co-operate* with, his brain. There is also the indirect danger that the enemy may avoid his blow and so cause him to overbalance and expose himself to a counter-blow—which he guards against by keeping the initiative and *fixing*, through repeated thrusts, the other's attention in order to deliver a knock-out blow at the first opportunity. The common object of all these acts is "Security" to his plans and person.

These acts, however, are defensive in purpose. They can but prolong the combat or pave the way for a decisive blow. Victory over the enemy can only be obtained by hitting him so decisively as to destroy his power of resistance. Throughout the course of the fight the man's essential aim is to obtain the opportunity to deliver a knock-out blow. Such a blow can only be gained by "surprise," unless his strength is so vastly superior that

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he can rely on sheer weight to give him eventual, if costly, victory. To adopt the method of attrition is not only a confession of stupidity, but a waste of his strength, endangering both his chances during the combat and the profit which he will reap from victory.

A decisive result through *surprise* may come by striking at an unexpected moment or from an unexpected direction, or owing to the unexpected strength put into the blow. It will normally be a compound of all three methods.

How can this surprise be achieved? It will be obtained primarily by *Concealment*, *Concentrated force*, and *Speed*. In order to counter the observant eye of his antagonist, the man must mask his intentions and deceive his enemy as to the point and moment at which he intends to strike decisively. For his blow to be decisive, he must make it as hard as possible. In order to penetrate his enemy's guard and get his blow in before it can be parried, the man must be quick to perceive an opening and must then strike like lightning. The actual blow will be effected by a *manœuvre of strength against weakness*, thrusting in his heaviest possible blow against his opponent's unguarded spot or flank.

The link between these two forms of action, guarding and hitting, is the man's power of movement, his "mobility." This mobility, whether it be of his brain, his muscles, or his limbs, is not only common to both guarding and hitting, but the mainspring which sets and keeps them going. The means through which the man develops the fullest degree of mobility are the control or *direction* given by his brain, the *speed* with which his limbs carry out the dictates of his brain, and the smooth and flexible interplay of his muscles which ensure

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co-operation between brain and limbs. Thus we see that *Co-operation* is a means common to both *security* and *mobility*, while *Speed* is a means common to both *surprise and mobility*. It may help in understanding, and applying, the principles thus deduced if we picture *mobility* as a central pivot or pole on which revolve the opposing general, or abstract, principles of *security* and *surprise*. Each rests on two concrete means, or principles of action —security on *information* and protective *formation*, surprise on *concealment* (counter to enemy's information) and *concentration* (counter to enemy's formation). *Co-operation* and *Speed* form the two hinges between the central pivot, mobility, and the principles of security and surprise respectively. Down through the central pivot runs *Direction*. If one may stretch the simile to enlarge the lesson, *direction* is the initial current which sets the whole machine of principles in motion, and ultimately the channel along which the force generated by the machine flows to attain the objective.

Force is what the fighter expends to gain his object. His muscular strength is fixed and unalterable, but if he expends it in accordance with these principles he will increase its effect, and so reap the most profitable results from it. Therefore every plan and action must be based on the universal law of economic expenditure of force, or as it is usually called, economy of force. The principle of *security* fulfils the idea of economic guarding, the principle of *mobility* fulfils the idea of economic movement, and the principle of *surprise* fulfils the idea of economic guarding. Further, between the opposing requirements of guarding and hitting the man must make an economic distribution of his energy, putting all the force necessary to keep the initiative into his

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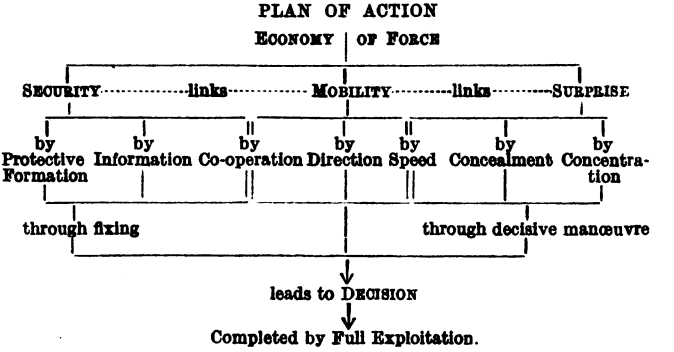
preparatory blows, but retaining as much of his strength as possible for the knock-out blow when the chance comes.

Finally, the result of these principles, abstract and active, put into practice will be a true economy of force. Thus we see that economy of force is both the source from which the principles are derived and the product of their true application.

Directly he has delivered the decisive blow, the man must follow it up and administer a "coup de grâce," if he is to avoid the danger that his enemy may recover and be able to renew the struggle.

Let us outline the framework which has been evolved.



Having deduced from this examination of individual combat the principles which govern correct action, the next step is to discover the correct sequence of action, in order that we can apply it to tactics. Here it may be argued that the conditions of the battle zone in modern war are different from those of a straightforward fight between two men; that in war the enemy's movements and location are often hidden from us until we are actually at grips with him.

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Certainly we agree, but the situation in that case will resemble that of two men fighting under similar conditions, such as in the dark wherein a man can only locate and reconnoitre his enemy by actually touching and feeling him. Thus the man in the dark resembles the commander in modern war. Let us examine the correct sequence of action which a man seeking to attack an enemy in the dark would naturally adopt.

"THE MAN FIGHTING IN THE DARK"

I.—In the first place he must seek his enemy. Therefore the man stretches out one arm to grope for his enemy, keeping it supple and ready to guard himself from surprise (protective formation and reconnaissance).

II.—When his outstretched arm touches his enemy, he would rapidly feel his way to a highly vulnerable spot, such as the latter's throat (reconnaissance by fighting, or probing).

III.—The man will then seize his adversary firmly by the throat, holding him at arm's length so that the latter can neither strike back effectively, nor wriggle away to avoid or parry the decisive blow (fixing).

IV.—Then while his enemy's whole attention is absorbed by the menacing hand at his throat, with his other fist the man strikes his opponent unexpectedly in an unguarded spot, delivering out of the dark a decisive knock-out blow (decisive manœuvre).

V.—Before his enemy can recover the man instantly follows up his advantage by taking steps to render him finally powerless (final exploitation of success).

To follow this sequence of action is the only

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sure path to victory. The act of fixing can only be neglected, if the enemy commits some mistake of supineness or the neglect of his own security by which he fixes himself without our intervention and so exposes himself to an immediate knock-out blow.

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CHAPTER III

APPLICATION TO BATTLE OF THE GOVERNING PRINCIPLES DEDUCED FROM INDIVIDUAL COMBAT

THE battle plan of any commander from the army to the platoon will depend primarily on what is the intended goal or object of his action. The commander of any force must first make up his mind clearly as to what is his object. He must then decide as to the first step, or immediate objective, which he will take with a view to attaining his final goal. In every operation there should only be one main objective and every action taken must tend to its attainment.

In the case of subordinate commanders of any rank these two questions will most often be settled for them. Having settled or received a decision as to these two preliminary questions, every commander will then draw up his plan of action, based on the law of economy of force in its three aspects—economic guarding, hitting, and movement.

A. **Security.**—In war as in individual combat, security is needed to *personnel*—against direct loss, such as casualties inflicted by the fire or assault of the enemy, as well as against premature exhaustion from the lack of supplies, ammunition, or rest, due to the enemy's interference with the life-line of the force—its communications; to the *morale* of the troops, which may be undermined by any of the foregoing causes, and is even more

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quickly destroyed by the shock of any enemy surprise or through the loss of confidence due to bad handling and unnecessary loss of life; finally, against the indirect though equally serious danger to our *plans* which we suffer if the enemy is able to avoid or turn to meet our decisive blow. It is of no use to aim a decisive blow at the adversary if he is able to slip out of reach before the blow has been planted. Our blow will only strike into the void, and there is no more dangerous moment than that which occurs when we have gathered up all our energies for a knock-out blow only to waste it on the air. For the moment we are off our balance and exposed helplessly to a counter-thrust. Similarly in war a force has been concentrated and deployed in a particular direction and an interval must elapse before it can be re-concentrated in a fresh direction.

How is security obtained? Exactly as did the man in the dark. He pushed out one arm, which in war means adopting a **disposition** or **formation of security.** This formation must fulfil two requirements:—

Dispersion (*i.e.* spreading out into a number of separate parts) is needed to save casualties from fire and to avoid the danger that a surprise from a flank may overwhelm the whole force or unit before a change of direction to meet it can be effected. **Division,** in depth, or successive bodies, is required in order to prevent the whole being surprised and engaged when the enemy is encountered, and to ensure that the commander has a reserve of strength in hand to manœuvre against the resistance with which the forward body is engaged.

In the second place, initial security is obtained by **information,** which is gained in battle first, and

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also throughout by **observation**, and second by **probing**. Observation is carried out by the air service, by the intelligence service, by spies, by reconnaissance and scouting, and by the personal survey of the commander. Probing (reconnaissance by fighting) is effected by preliminary attacks and raids in order to locate the enemy's exact positions, his approximate strength in any locality, and to find any unguarded approaches or weakly held portions of his resistance.

Thirdly, security depends at all times on the smooth working and co-ordination of the different parts of the force and the units which compose them. This **co-operation** demands not only the maintenance of touch but mutual support among the subordinate units. Co-operation is not a separate act; it is a thread running through the whole plan and its execution.

It will be realised that *security by formation and information* is primarily obtained previous to the general engagement of a force or its commitment to a definite rôle. *Security* is finally assured by the forward body attacking in one direction to **fix** the enemy so firmly that he is unable to avoid or turn to meet the decisive surprise attack delivered from another direction.

The aim of this fixing attack is to pave the way for the knock-out blow by pinning the enemy to his ground, by engaging his entire attention in its direction, and by attracting and absorbing his reserves, so uncovering a vulnerable spot against which the decisive attack can be launched. This weak spot may be found either on one of the enemy's flanks, or on a sector of his front denuded of troops, or again on an inner flank exposed by the penetration of the forward units.

Thus *Security through Fixing*, if defensive in

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purpose, is essentially offensive in the manner of its execution. In fact, as the means available for ensuring *security* are inevitably inferior in proportion to those for the decisive *surprise* blow, the commander and the troops who are entrusted with this primary rôle—*security through fixing*—must act with even greater vigour and determination than the manœuvre reserve if their mission is to be fulfilled. " Feint attacks " and " demonstrations " may be useful as a means to *surprise*, but they are hopelessly ineffective as a means to *Security*.

Self-preservation has no place in the action of any forward body, but only self-sacrifice—to ensure the preservation (*security*) of the whole and of the commander's plan, through the attainment of the objective.

Thus we realise that *security* has a very much wider meaning than that conveyed by the passive term " protection," which depends principally on *formation*. Security when being carried out is more active than passive, for it comprises two positive acts—*information* and *fixing*—to one negative act—*formation*.

Of all the principles and so-called principles of war, security has been the least understood. To its neglect and to the failure to understand it may fairly be ascribed most of the failures of offensives, as well as the disasters, in military history. So long, however, as it was confounded with mere protection, its neglect when once contact had been made was at least understandable.

B. **Surprise.**—The decisive attack to be successful must come as a surprise either in *time*, *space*, or *force*. It must be launched at a moment which the enemy does not anticipate, from a direction which he does not expect, or by an unexpected concentration of superior force at the

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decisive spot. **Concentration** is often termed a distinct principle, whereas it is really a part of the greater principle of surprise, for it implies the weakening, unknown to the enemy, of one portion of the force or front, in order to mass a superior weight of fire and numbers against an inferior quantity of the enemy, unforeseen by him.

Surprise in any of these forms will be obtained by **concealment** and **speed,** as well as by *concentration*, and the last will lack the value of surprise if the first two do not contribute to its effect.

Concealment, which counteracts the enemy's service of information, consists on the one hand of secrecy and the use of covered approaches, and, on the other, of the employment of ruses to deceive and distract the enemy's attention from the point at which the real decisive attack is aimed.

Speed, may be either of movement or mind. Speed of movement, again, is subdivided into forward, or momentum, and lateral, or flexibility. The use of mechanical transport, superior marching powers, good organisation and staff work, light equipment, all contribute to speed of movement. Speed of mind to seize an opening and exploit an unforeseen advantage is the product not only of the commander's training and natural ability, but also on the promptness of his information through his personal touch with the progress of the battle and the instant rendering of reports.

Surprise is effected and carried out by means of a **Decisive Manœuvre.** The essence of manœuvre is the concentration of strength against weakness either by outflanking the enemy or by exploiting and expanding an initial penetration made by the forward body. In either method the effect is to assault an exposed flank of the enemy resistance which is already fixed from the front.

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The essential formula of **fixing** + **decisive manœuvre** can therefore be summarised as that of **striking the enemy from two directions concurrently.**

C. **Mobility.**—As in individual combat, *mobility* is not only the tactical link between security and surprise, but their mainspring. *Mobility* is economic movement, *i.e.* movement that fulfils the law of economy of force. The means to it are the **direction** given by the commander, the **speed** with which this is carried out, and the **co-operation** by which its fulfilment is ensured without check or waste of energy—caused by friction, loss of touch, and misunderstanding of the plan or direction.

Thus we see that in battle as in boxing, *mobility* and *security* both depend on *co-operation*, just as *surprise* and *mobility* both depend on *speed*. *Direction* covers both the choice of the objective and its maintenance; it may be said to start with the choice of the objective and run through its maintenance until it arrives at the objective.

D. **Economy of Force (Distribution).**—Like the man in individual combat, the commander in war fulfils the law of economy of force indirectly through fulfilling the principles in his plan and action, and directly by distributing his available force, in numbers and weapons, to the best economic advantage. He must devote all the force that is necessary in order to ensure security and fix the enemy's whole attention, pin him to his ground ready for the knock-out blow, and draw in his reserves away from the spot selected for the decisive attack. But the strength allotted for these purposes must be the absolute minimum essential to attain the commander's object. He must retain the maximum possible strength to carry out the culminating surprise blow and to exploit his success, so that he may reap the fullest profit from it. It must be

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remembered that while the decisive attack is made with the maximum possible force, its success depends upon the enemy being completely fixed. **Manœuvre is useless unless the enemy is first fixed in another direction.** Hence the body retained for manœuvre is not necessarily the larger. The " last straw that breaks the camel's back " is a fundamental truth of war.

Though the term " economy of force " is used in this book because it is both shorter and more familiar, the phrase " economic expenditure of force " more fully expresses the essential idea. The term " economy " has acquired in common speech the meaning of a cheese-paring parsimony instead of conveying the true idea of a distribution and use of force according to the laws of economic science, which shall tend to the fullest profit of the whole. Hence, in war economy of force is too often construed to mean " miserliness of force."

As a result, commanders have made the mistake of throwing in their troops in a series of inadequate driblets, which are too weak to achieve their mission. The resultant set-back not only encourages the enemy, but involves a disastrous delay before additional troops can be brought up. The same false idea has caused commanders to withhold part of their reserves and so fail to clinch the opportunity for a decisive blow. Reserves, particularly in the case of subordinate units, are intended for unhesitating use directly a good opportunity occurs, not to be held back indefinitely in view of a possible eventuality.

Force is the material which the commander uses in manufacturing his plan, and which he expends in order to gain his object. The more " economically " he does so the higher will be his dividend of success when cost has been deducted from gross

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receipts. He has only a fixed amount of material, but by using it according to the principles he can increase its effect, and hence his profit.

The Phases of Battle.—From "the man fighting in the dark" we deduce the right sequence of acts which are essential for a commander to fulfil—

First, he must advance on his enemy with his forces distributed in a formation of security, one that will both diminish the direct risk of losses and the indirect danger that any part might be isolated and ambushed before the rest of the force can support it. This is the *approach march.*

Secondly, he must locate the enemy's exact positions and their relative strength. This is the phase of *gaining contact,* which once made must on no account be lost.

Thirdly, he must fix the enemy by a strong and determined attack, not merely to pin him to his ground, but to force him to engage his reserves.

Fourthly, when, and only when, the enemy is fully fixed, the commander strikes his decisive blow. These third and fourth phases comprise *the attack,* the key to success in which is the combination of *fixing* and *decisive manœuvre.* Here in a nutshell is the one formula of tactics, to neglect which is always dangerous and generally a violation of economy of force—that while one fist or part of your force, whether an army or a platoon, fixes the enemy, the other part strikes at a vulnerable and exposed point, usually the flank or communications in war just as it is the chin or solar plexus in boxing. If the leader and instructor will but think of his forward body and reserve as his two fists, his understanding and explanation of tactics will be vastly simplified.

In modern battle these two acts of fixing (guarding) and decisive manœuvre (hitting) not

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only blend with each other, but because of the depth of defensive positions form a recurring cycle—the need for reconnaissance and a formation of security are constant so long as a unit, large or small, is in the battle zone; and directly the convergent manœuvre has resulted in the overthrow of a segment of the enemy resistance, the protective formation must be reconstituted.

Fifth, comes Pursuit or Final Exploitation:

Pursuit or Final Exploitation.—The correct execution of the principles of Security and Surprise, pivoting on Mobility, having achieved a decision and resulted in the dislodgment of the enemy, his overthrow must be completed by a relentless pursuit. The disintegration of units and the demoralisation of men are the most important results of defeat. If the enemy is allowed to draw back out of reach he can recover and live to fight another day. Therefore it must be our aim to permit him no time to get his "second wind," and to this end no interval should elapse before the pursuit is taken up.

History proves that the body which has delivered the decisive attack can rarely be reorganised in time to carry out an effective pursuit. The lesson is especially true in the normal case where the decisive attack is made from a flank. It is impossible in the heat of battle after an assault to effect the change of direction necessary for pursuit without a long delay for reorganisation.

It is essential that fresh troops, and troops moreover who have only to advance straight to their front should be used for the final act of pursuit. A separate body, composed if possible of fast-moving troops, should be employed for this phase. Light tanks, armoured cars, and cavalry, all of whom it would be uneconomic to use in the

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preceding phases, should form the backbone of the pursuit body.

Before passing on to consider the application of this framework of principles and sequence of action to infantry tactics, it may be convenient to construct it in the form of a diagram. It may thus be easily memorised until its application to tactical problems in the field and on the map, as well as to the study of military history, becomes instinctive.*

* See Plate 1, at the end of the book.

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PART II

APPLICATION OF THE FRAMEWORK TO INFANTRY TACTICS

CHAPTER IV

NEW CHARACTERISTICS OF THE INFANTRY FIGHT

INFANTRY tactics have been thrown into the melting pot by the realisation, which has been forced upon us, that our former methods are inapplicable and wasteful of force under modern conditions. The outstanding change has been the realisation that the weight, or force, of an attack does not increase in proportion to the numbers of men thrown in; that progress can only be made by intelligent manœuvre of fire power.

Increasing numbers beyond a certain density adds nothing to the effectiveness of the attack or defence, but only results in greater casualties. Instead of dense lines of bayonet men in attack, or crowded positions in defence, one must use widely dispersed combat groups containing comparatively few men, but well equipped with fire and smoke weapons. These must be allowed ample frontage to manœuvre and probe for the enemy's weak spots. Thus the exact intervals will depend on whether the ground is open or close.

Further, we need to recast our ideas concerning the rôle and scope of infantry. To cover the whole

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front of battle with infantry spread like butter on bread, is no longer practicable under the changed conditions brought about by modern fire. Instead, there is an urgent need of carefully selecting infantry sectors of attack—ground where plenty of cover exists, ground which will hinder the action of hostile machine-guns and tanks, ground which is unsuitable for our own tanks.

When we remember the scale of the artillery concentrations that were thought necessary in the Great War to pave the way for infantry over open country against machine-gun defences, and the relative strength of our present artillery support, we should realise that the universality of infantry action has come to an end. Infantry must become a special arm for a special purpose, just as are tanks and artillery. We have called infantry the " queen of battle," and then degraded it to the level of a general domestic drudge.

It is advisable at this point to call attention to the fact that in any large action each of the infantry units will necessarily only be allotted a fraction of the whole frontage of the force of which it forms part. This narrow sector is bounded on either side by neighbouring units of a corresponding size.

How then is it possible for attack or defence on the part of the subordinate infantry unit to be aught but straight to its front ? The change is primarily due to the range and deadliness of modern weapons. These have enforced a wide dispersion of the combatants on the battlefield and wide intervals between the adjoining units. This dispersion has rendered penetration possible by the fire units—the sections—between the enemy defence posts.

By exploiting this initial penetration by the

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section, the platoon and company commanders in turn can attack in front and flank simultaneously the posts of the enemy which are directly opposing them. Thus they can change their small sector of the battle from a mere bludgeon fight into a manœuvre combat, so filling the principle of *surprise* by striking " from an unexpected direction against an unguarded spot "—the flank exposed by the penetration of the crevices in the enemy positions.

The essence of these tactics is that the enemy post is attacked from two directions concurrently, so that in attempting to parry the one blow the defenders expose themselves to the other.

As the posts of the defence, being based on the contours of the ground, offer a naturally irregular line, the attacking sections can often take advantage of these minor salients and re-entrants to bring convergent fire to bear on the enemy's forward posts even before a penetration is made. Fire from a flank multiplies the effects of the bullets and is most demoralising to the enemy, who are forced to face and defend several sides at once.

Fire and movement, frontal and flank action, will alternate and be combined between the sections, until, finally, convergent fire paves the way for a convergent assault.

Manœuvre in war prior to the middle of the eighteenth century was the weapon of the supreme commander only. The army moved as a compact body, united at all times—hence it was the commander of the army alone who had the power of striking an enemy force at two or more different angles concurrently.

A revolution in both strategy and tactics was brought about when armies were organised in permanent divisions. The limbs of the army—its

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divisions or columns—moved independently though according to a common purpose. As these columns moved by separated routes, penetration into the intervals became possible, and in this way their commanders gained the power to manœuvre.

Now that the infantry unit also has become possessed of this power, the truth is self-evident that its correct tactics should henceforward be based on the same fundamental principles which govern the action of all independent bodies capable of manœuvre. The infantry unit is no longer a fixed segment of the battle machine, but becomes an independent moving part—a miniature replica of the whole, fighting its own small battle.

Its object or mission is to contribute its share towards the fulfilment of the superior commander's plan, to which its own action must be definitely subordinated, and even its objective will often be selected for it, but its commander carries out his own plan of action according to the fundamental framework of war.

This new liberty of action demands a much higher and more intelligent co-operation on the part of the subordinate leader. In his plan and his every action he must seek to divine and fulfil the object in his superior's mind—so only can economy of force be attained. The subordinate whose action, however spectacular, is a bad debt against his superior's economy of force, may cause the bankruptcy of the whole plan, so narrow is often the margin between success and failure in battle.

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CHAPTER V

INFANTRY IN ATTACK

THE infantry unit—battalion, company, or platoon —will be divided into a forward body and reserve.

The forward body will seek out for, and when located, attack the enemy along the whole front of its allotted sector, in order to *penetrate* his defences and gain the objective. If it cannot find a gap in its sector owing to the fire from a centre of enemy resistance, the forward body must seize this resistance "by the throat," closing with it relentlessly under cover of fire and ground. In this way, even should the forward body not succeed in assaulting the resistance, it will *fix* the whole attention of the immediate enemy, and so pave the way for a surprise blow by the reserve.

The reserve will move close at hand. If the forward body is checked, the commander of the whole unit will use his reserve to outflank and deliver a decisive *surprise* blow against the enemy resistance opposing to the forward body.

When troops of the more mobile arms are not available for pursuit, or in the exceptional case where a battalion or company is carrying out a minor attack independently, part of the reserve should be detailed beforehand as a pursuit body.

This will be launched in pursuit of the enemy directly the objective is gained, in order to complete his local overthrow. For convenience, this part may be termed the pursuit reserve in order to distinguish it from the other part, the manœuvre reserve.

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Having indicated briefly the functions of the respective portions of an infantry unit, let us now analyse them in detail in accordance with the framework.

THE OBJECTIVE

In battle *the only true objective is the enemy.* But his actual strength and dispositions can only be ascertained by fighting. Hence certain topographical objectives must be allotted beforehand in order to serve as stepping stones by means of which the commander can co-ordinate the advance and the artillery can co-operate with and support the infantry. On the other hand, it is a direct violation of economy of force to limit the advance of unexhausted units which find weak spots and can press on with little opposition. One should only replace those units whose momentum is checked by fatigue and severe opposition. The smaller the unit the more difficult it is to foresee the degree of resistance which it will meet, therefore these stepping stones—termed objectives—should be restricted to the battalion or higher formations, except against highly organised enemy defences. In mobile warfare the companies, platoons, and sections of each battalion should press on to gain the battalion objective, their own objective being the only true one—the *enemy*, wherever they find him in their path.

ECONOMY OF FORCE

In strategy or grand tactics the economic disposal of our available forces is a complex problem, but in infantry tactics it is comparatively simple. In the British Army each infantry commander, platoon, company, battalion or brigade,

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has only four fighting sub-units under his command, apart from certain auxiliary fire weapons such as machine-guns.

Hence he has only three possible ways in which he can distribute them, and these are :—

I.—*One sub-unit forward and three held in hand for decisive manœuvre.* This distribution will normally be best when advancing against an unlocated enemy, as in the approach march or encounter attack, because *security* is the prime consideration. Thus he retains the bulk of his strength in hand until the position of the enemy has been discovered, so ensuring better results when the decisive manœuvre is carried out.

II.—*Two sub-units forward and two in reserve for manœuvre.* In a definite attack against an enemy whose positions have been located, *Security* through fixing and *Surprise* through manœuvre are the essential and equal considerations. In such a case, therefore, this distribution will usually be advisable in order to secure that the whole front of the enemy position in his sector is tested thoroughly so that a weak part may be found. Moreover, it is imperative that the forward body shall not be held up before it has firmly fixed the main resistance of the enemy, otherwise the reserve may have to be used before the decisive moment—which would be the reverse of economy of force.

III.—*Three sub-units forward and one in reserve for manœuvre.* This distribution may be advisable when following a creeping barrage—which reduces the need or possibility of manœuvre. It will ensure that the whole frontage is cleared directly the barrage lifts, and so enable the forward sub-units to keep close behind the barrage. Further reasons for this distribution are that in such a case the strongest opposition will probably come early,

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and that a counter-barrage is likely, in which event the bulk of the unit will escape it.

It may also be advisable to adopt this distribution when allotted an unusually broad frontage, in order to cover it with fire. It entails the risk, however, of limiting the force of your manœuvre.

Direction

For the fulfilment of the law of economy of force a right choice and maintenance of direction is essential. This direction may be visualised as the line along which force flows to reach the objective. True, *i.e.* economic, *direction* will depend on each subordinate commander understanding the plan of his superior and basing not only his original plan, but also his subsequent decisions during the course of the fight on the attainment of the common objective. If an unexpected development arises which modifies the original instructions he received, his action should be based on what he believes would be his superior's wish in the altered situation. Maintenance of direction is all-important and, to this end, compass bearings should be taken before and during the advance.

PREPARATORY ACTION

Guarding

"The man extends one arm to grope for, feel, and seize his enemy by the throat."

Security by Formation

We deduce from our study of the man in the dark that each unit should move with an advanced guard or forward body—the outstretched arm—

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pushed out in the probable direction of the enemy, whilst the main, or reserve body, follows in rear. The latter will thus be ready to manœuvre against any enemy which the forward body encounters, and by its mere presence will protect the flanks of the forward body. In modern war the defenders can only be definitely located *bit by bit by actual attack*. Hence the danger of a surprise counter-attack is ever present.

An open formation of security is, therefore, just as vital during the attack as during the approach.

Type of Formation

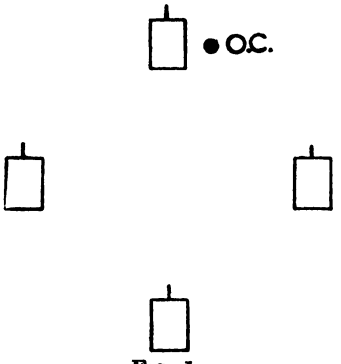

FIG. 1.

(*a*) **When the enemy is unlocated.**—Until your own immediate enemy is located, you cannot be certain of the exact direction in which he will be encountered. This consideration indicates that in the approach or attack against an unlocated enemy a formation such as the *diamond* (see Figs. 1 and 2) will usually be best, because it is the easiest on which to pivot in whatever direction the enemy is encountered. It prevents more than one of the sub-units being surprised by the enemy. Whichever point of the diamond first encounters the enemy has the duty of fixing him whilst the other three manœuvre to take the enemy in flank.

(*b*) **When the enemy is located.**—His direction will be certain. Penetration or fixing is the primary essential, and to this end the whole extent of the enemy's position within your frontage must be

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explored and tested in order to create a weak spot. At the same time sufficient strength must be retained, and handily placed, for manœuvre. These

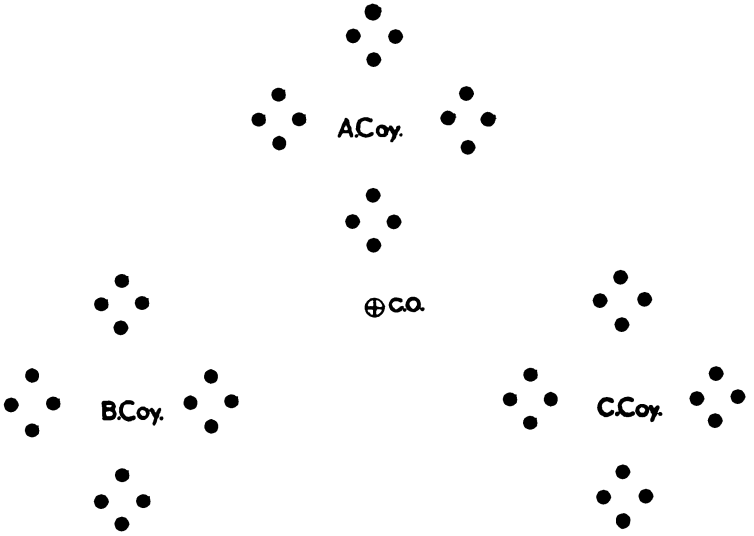

FIG. 2.

considerations indicate that a formation such as a *modified square* (see Fig. 3) should be adopted. The two forward sub-units should be well apart in

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order to cover your whole frontage with fire and probe for weak spots (security to plan). The two reserve sub-units should move as close together as the enemy's fire allows, in order to be under quicker control for manœuvre (surprise by speed). They may be either side by side or one behind the other; the latter is generally preferable, as thus they are really under the commander's hand, and he can manœuvre them with the least possible delay for a flank blow, to exploit a penetration, or to replace a forward company or platoon.

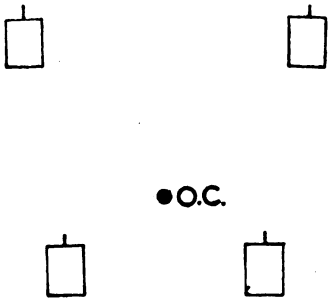

FIG. 8.

Further, it diminishes the problem of moving troops to a flank under fire, and instils the idea of moving them by the most covered route available.

Both *diamond* and *square* formations fulfil the requirements of dispersion and division.

(*c*) **Section formations.**—The section, being the actual fire or fighting unit, is not divisible, and therefore *dispersion* is the only requirement which need be considered from the point of view of *security*. The principle of *surprise*, however, demands a formation which shall give the power of speed, concealment, and concentration (of fire power).

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Speed is best fulfilled by an arrowhead formation (see Fig. 4), because it is under the instant control and direction of the section commander, who is at the point of the arrow, while at the same time the men can move freely.

Concealment through the use of cover is gained best by a worm formation, particularly when moving along any defile, and next by the arrowhead.

Concentration of fire power is greatest in the case of a line, although the arrowhead is practically as good.

Dispersion is most effective in the case of arrowhead, with line second.

A consideration of these factors leads us to the following conclusions :—

i. Arrowhead formation is most suitable for both fire and movement. It is no more vulnerable to frontal fire, and less vulnerable to enfilade fire, than the extended line. It is speedier and better

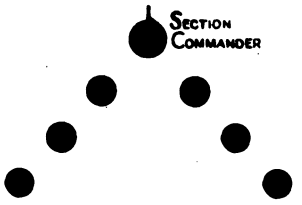

Fig. 4.

able to use covered approaches for manœuvre, and is capable of firing in any direction. In actual practice, it will generally approximate to a line when the men lie down to fire.

ii. When advancing along defiles (*e.g.* hedges and ditches) or through woods and thick bush, the arrowhead should be closed in to a worm formation, in file or single file.

iii. Line formation will be used for fire when

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lining a bank or other parallel fire position. But for movement it not only tends to loss of direction, but is a much more visible, and therefore easier, target.

iv. During the advance the section commander must use his intelligence and change from one formation to another as the ground dictates.

(*d*) **Intervals** will depend mainly on whether the ground is open or close. The effect of modern fire-weapons and the need to have room for manœuvre indicate that the interval between the section groups should be a minimum of 100 yards over open ground. A platoon, therefore, should have a frontage of about 200 yards, a company 400–600, and a battalion 800–1500 yards. The greater concealment afforded by close country requires and also enables the intervals to be reduced. *Concentration* (*surprise in force*) indicates that the minimum frontage, *i.e.* 200, 400, and 800 yards respectively, is preferable, except where shortage of available troops, enemy weakness or very exposed ground suggest wider intervals.

(*e*) **Distances.**—The distance of the reserve from the forward body should be gauged by weighing security against surprise in the scales of mobility, *i.e.* it should be such as to avoid the fire aimed at the forward body and also to avoid becoming entangled in a frontal engagement, whilst being near enough to exploit a penetration and give immediate aid by manœuvre. A normal distance might be 400 yards between companies and 200 yards between platoons.

Security by Information (Reconnaissance)

Observation

Observation may be divided into two classes, "previous to battle" and "during battle."

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(*a*) **Previous Observation.**—This is carried out by three methods :—

i. The commander of each infantry unit studies all information regarding the enemy and the ground, which his superiors or the other arms, such as cavalry and aircraft, have been able to obtain.

ii. He carries out a personal reconnaissance of the ground ahead before committing his unit to an attack on a definite objective. In this survey he should be accompanied by his sub-unit com manders and any *liaison* officers.

iii. Sending forward specially trained company scouts to carry out long-distance reconnaissance to obtain information on definite points.

(*b*) **Battle Observation.**—i. This is achieved mainly by ground scouts, the forward sections, or patrols moving ahead of, but in touch with, the sections, or higher units respectively which they are covering.

Each platoon before it deploys will normally send a pair of scouts ahead to ensure protection. These scouts should move ahead of, but within view of their platoon. The keynote governing the distance should be that the scouts are within easy reach of support by their platoon. It is their rôle to discover the most covered ways of approach and to give warning of defence posts or parties of the enemy, and thus prevent the platoon coming under heavy surprise fire. They should move by bounds and at the end of each bound one scout should signal back for the platoon to come on or the reverse, whilst the other remains observing.

When the platoon deploys, each of the forward sections may similarly send forward a pair of scouts to cover its advance. When held up by the enemy's fire the section scouts should take up a position

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from which they can cover the section, as it moves up. The section should move to rejoin its scouts, in order that it may become an intact fighting organisation once more, unless the position they have taken up is unfavourable.

But, actually, the value of section scouts, after the platoon deploys, is questionable and their disadvantages numerous. A forward platoon in square or diamond formation is protected against surprise, and incidentally protects the platoons behind, for the forward sections themselves really form the ground scouts of the troops following on (security). Further, the section commander is better qualified than his nominal section scouts to judge the ground and route which are best for his section's advance (direction for mobility). Thirdly, by keeping the section intact its fire power will be united and capable of being brought to bear instantly (concentration for surprise). To detach part of a tiny section only leads to loss of control, slowness of advance, and masking fire, whereas the tests of security, direction, and concentration alike show that the truer economy of force is to dispense with ground scouts once the platoon has deployed.

This lesson is emphasised in close country where section scouts run a greater risk of being destroyed in detail and are slower to act, while, on the other hand, the increased cover enables the section to conceal its advance nearly as well as can the two scouts.

ii. Patrols, which should consist of a complete section, or platoon, may be used to afford close protection to larger units. They should move in touch with the unit which they are covering, but considerably beyond the radius of action of the ground scouts. Like larger units also they

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should move in a formation of security such as the diamond.

Direction.—The forward sections (or scouts) do not necessarily advance through the centre of their platoon sector. They must use all available cover and commanding ground from which they can observe the country over which their platoon is moving. This applies equally to larger forward bodies.

Probing

Probing, or reconnaissance by fighting, will be carried out by the advance of the forward units, which by actually attacking the enemy's position will feel and test it at all points, and so endeavour to discover or make a breach at some weak spot. Hence it forms the preliminary phase of fixing.

THE COMBAT

I. Security through Fixing (Guarding)

Each forward body (company, platoon, or section) should advance direct on the enemy in order to reconnoitre his weak spots *by fighting*, penetrate his defences, and so continue its advance until it has gained the objective. If and when its advance is barred by an enemy defended post or locality within its frontage, the forward body will " seize the enemy by the throat " in order to strangle him, or, in other words, to assault and destroy him.

To this end the forward body must, with relentless determination, close with the enemy under cover of its own and any other available fire, and by the use of every scrap of cover. Such a determined advance will fix the attention of the enemy resistance long before it reaches the assaulting point,

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and so enable the reserve to work round his flank. Thus, the immediate enemy will be attacked *from two directions concurrently*, and in whichever direction he turns his attention and fire, the body which is closing with him from the other direction will be able to seize the chance for a decisive assault.

As in the case of "the man in the dark," the enemy will only be really *fixed*, if the grip on the throat is a strangle-hold, "the fingers" pressing deep into the flesh in order to reach the windpipe. "The fingers" are the forward sections. They must work forward continually from one fire position to another under cover of fire, smoke, and ground, pushing ever closer to the "windpipe," getting a grip in some crevice of the enemy's position from which they can rake him with oblique fire, and finally assault him. If the reserve has got round his flank and assaults first, well and good. The likelihood of this result does not affect the determination to get to grips on the part of the members of the forward body, who in any case make the assault possible if they do not actually deliver it.

Thus we see that the act of fixing can only be achieved by the combination of both fire and movement on the part of the forward body. There must be the oncoming threat of a forward spring in order fully to fix the enemy's attention. Fire alone, from the hastily chosen halting places of an attacker, will not deceive and absorb the attention of a defender who is behind carefully selected cover. If the enemy's attention and fire are not *fixed* in the original direction, he can turn to face the manœuvre blow which comes from a fresh direction. In this case the outflanking movement is no longer a manœuvre, but becomes a second frontal attack.

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There is the further danger that during this flanking movement, the manœuvre reserve may be exposed to cross fire or counter-attack from other enemy posts. This can only be averted by the neighbouring forward bodies really fixing their own immediate enemy. To ensure this *co-operation* every forward body must be determined to close with, and fix the whole attention of, the enemy opposed to them.

Co-operation.—Essential as it is that infantry must be imbued with the determination to fix, in the fullest sense, any and every post and centre of enemy resistance which they encounter in their path, it must be remembered that in actual battle a majority of such centres will be fixed by the fire of artillery, tanks, and possibly aircraft. Every infantry leader must be on the look-out for these opportunities when the attention and fire of the enemy is fixed by the action of the other arms. When they occur he must instantly seize the chance to deliver a surprise knock-out blow. The initiative which grasps such chances is the truest fulfilment of *co-operation*.

Co-operation between the infantry units themselves (*i.e.* internal co-operation) implies, (i) keeping touch with the units on their flanks, (ii) with their superior, (iii) combining their action with that of the other parts of the larger unit of which they form one part, (iv) initiative in helping other units if a chance occurs.

i. The maintenance of touch is one of the most vital, and yet neglected, factors in the success of any operation, and especially an attack. For the larger units this is normally effected by the use of liaison patrols at pre-arranged stages or when the necessity arises. But it is better still to maintain these throughout an attack, either by detailing

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liaison patrols from the reserve or assigning this rôle as the primary duty of a platoon on each flank. In each of the smaller units a special observer should be detailed, whose duty it will be to watch and keep his commander informed of the progress of the neighbouring units. The benefit to security and effective mobility more than offsets the slight decrease in fire-power, and hence is a truer fulfilment of economy of force.

ii. Maintenance of touch with one's superior is primarily a question of sending back frequent reports throughout the attack, particularly after the capture of each successive post or position of the enemy and directly the objective has been gained.

Reports should include :—

(*a*) Your exact position at the time of reporting.

(*b*) Progress made.

(*c*) Degree of the enemy resistance.

(*d*) Movements and location of the enemy.

(*e*) The next step you intend to take.

iii. The sections of the platoon or the platoons of a company must combine like the members of a Rugby football team—the forward sub-units are the forwards and the reserve sub-units are the backs. Thus the forwards by disorganising or breaking through the enemy's defence create an opening for their backs to exploit, while they must also be ever ready to aid one of their fellow forwards in a rush which shall breach the enemy's dispositions. These are the two principal forms of co-operative action. The first depends mainly on pushing their own advance with whole-hearted determination ; the second on bringing oblique or enfilade fire to bear on any enemy post opposing the other forward sub-unit, so that the resistance is crushed as by a pair of nutcrackers.

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iv. While the best way of supporting *another unit* is to push one's own advance and so uncover the flank of the latter's opponents, opportunities of helping the latter by flanking fire should be seized, so long as such *external* co-operation does not delay the advance of one's own unit.

Forward Surprise.—Once committed to an attack on a located enemy and a definite objective, the paramount essential is to fulfil the principle of surprise for their own benefit, in order to achieve security—by fixing—for the whole unit.

Hence **speed** demands that the action of the forward infantry in attack must consist of a constant pressing forward to close with the enemy in order to find the weak spots in his defences.

To this end the leading sections must not delay the advance by halting to fire until no further progress can be made without *beating down the hostile fire.*

Concealment demands that the section leaders must be on the look-out at all times during the advance to take advantage of any available cover from fire and concealment from view afforded by the ground, or by the fire or smoke of neighbouring units or the other arms.

i. They should pick out the most covered route of advance, not endeavour to keep in a straight line across the open, which in face of modern fire is not only foolhardy but futile.

ii. They must seize the momentary chances given, by a shell burst, a smoke cloud, a tank, a low-flying aeroplane, or the fire of another group, to dash to the next scrap of cover, or to deliver one of the instantaneous assaults characteristic of modern battle.

iii. The forward sections can often fix the enemy defence posts opposed to them far more

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effectively by firing smoke to windward of them, than by rifle or Lewis gun fire. The smoke drifting down over the enemy blinds them and so enables the reserve sections to work round their flank unseen to assault them. Moreover, this method economises ammunition. The quantity of smoke grenades which the infantry can carry will, however, be limited by the essential need for mobility. *Infantry* smoke must, therefore, be reserved for specially suitable targets. Its limited volume will avoid the danger that it might interfere with artillery and command observation.

II. Decisive Manœuvre (Hitting)

"The man delivers a decisive blow from an unexpected direction against an unguarded spot."

Each unit's reserve will move close behind. Its normal purpose will be to assist, by means of manœuvre, the forward body to advance and gain the objective. If the fire of the enemy holds up the forward body it will be the rôle of the reserve to turn the flank of, and enfilade, the enemy resistance which is opposing the forward body.

Direction + Speed indicate that :—

i. To achieve this the reserve of a unit may have to quit its own sector and follow in the wake of a neighbouring unit which is still advancing. It will pass through the gap thus made, and come in on the flank of the enemy, against which it will deliver an immediate blow.

ii. The success of any manœuvre, or the exploitation of any penetration, largely depends on the quickness of the commander's decision and action—opportunities in battle are fleeting. One means to this is personal observation, which implies that the commander should be well forward. But

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personal observation is not always possible or quick enough, and so, above the platoon, the commander is largely dependent on the speed with which information is received. Now officers are so fully engaged in handling their units that they are rarely able to send back a report until a lull in the fight occurs, owing to the capture of a post.

Thus to enable him to take instant advantage of any sudden opening or success, the battalion or company commander might detail an officer or selected N.C.O., with runners, to move with each of his forward companies or platoons. Such a *liaison agent* will be free to devote his whole attention to observing the progress of the fight, and will thus be able to send back an early message —saving priceless minutes—directly a weak spot is discovered in the defence.

Concealment indicates that :—

i. The manœuvre should be made under cover if possible, and not under the enemy's fire. The distance of the reserve from the forward body should be sufficient, if possible, to enable this to be done.

ii. During the flanking movement every advantage must be taken of cover, particularly that which will conceal it from the view of the actual post or centre of resistance to be assaulted.

Full use should be made of any defiles, but security from surprise enfilade fire down them should be assured by sending scouts or a forward section a short distance in advance.

iii. Fire should not be opened by the manœuving reserve until it is certain that the immediate enemy has spotted it. The aim should be to achieve a silent assault with the bayonet without previous firing.

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iv. Ruses should be utilised to distract and mislead the enemy, so long as they do not require more than a few men. They must not be allowed to infringe the principle of concentration.

Concentration

i. Demands that the reserve should normally be directed against one flank only of the enemy resistance. Infantry units have not sufficient weight to make it advisable to attempt to envelop the enemy on both flanks. The result of such a dispersion will usually be that neither blow is sufficiently strong to succeed.

ii. Demands that the commander should throw in his reserve as a whole, and not in driblets. A blow which is too weak encourages the enemy and wastes *time*—which is all-important. Such a mistake may upset the general timetable and throw out of gear the attack of the whole force. Moreover, in the case of all subordinate units, the dangers which might result from "putting all the eggs in one basket" are minimised, because there are further units in rear.

iii. If the enemy counter-attack during the advance, the reserve will be at hand and ready to counter-manœuvre against them. The commander of the unit must not, however, hold back or hesitate to throw in his reserve to turn the enemy's flank directly it is clear that the forward body has fixed him.

Co-operation.—It must be clearly understood that the assault is not necessarily carried out by the manœuvre reserve. If the enemy turn to meet the latter, it will be the duty of the forward body to seize the opportunity to rush in and assault the enemy.

To ensure good team work in the confusion of battle every unit commander, separated from his

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own superior who finds another similar unit in front of him engaged in fixing the enemy, must be ready to act as a manœuvre reserve to the unit in front. To this end he should get in touch with the unit in front and find out if the latter requires him to aid it by a decisive manœuvre.

Security by formation demands that the reserve must itself be distributed in depth to guard against the danger of counter-attack during its flank movement.

Security by information demands that the reserve should move with scouts or scout sections ahead directly it begins the outflanking movement. These will ensure security to the plan by finding the most direct and concealed route.

As soon as the manœuvre has achieved its aim the forward body and reserve will mop up, reorganise, and continue the advance until the objective has been gained. They will then consolidate the ground won in the most suitable tactical positions in the vicinity.

III. Exploitation by Pursuit *

"The man instantly follows up his advantage and renders his enemy finally powerless."

Pursuit, to be effective, must be launched directly the objective is gained. For the moment the enemy in the locality will be disorganised and probably demoralised.

If the troops who carried out the assault have to be reorganised for pursuit, precious minutes will be lost. If a separate unit under a different

* Exploitation during the attack, *i.e.* prior to gaining the final objective, is dealt with under Problem 1 of next chapter.

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commander is used, delay is bound to occur and the pressure on the enemy be relaxed, thus affording him a chance to recover.

Hence a fresh body, but one which is under the control of the commander who has taken the objective, should be used for pursuit.

If tanks or other fast-moving troops are not available for this purpose, an infantry pursuit body should be employed to carry out and continue pursuit until such time as the more mobile arms or

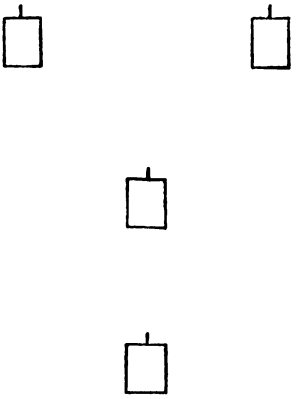

FIG. 5.

fresh troops from the rear have caught up and passed through them. Thus a relentless pressure will be maintained on the yielding enemy. Should the attack of the forward and first (or manœuvre) reserve companies definitely fail to gain the objective, the battalion commander could use his pursuit reserve to relieve them or to meet counter-attacks. Where the repulse is not so definite, and the battalion commander sees that the scales are hovering between success and failure, he should

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not hesitate to throw in his pursuit reserve to turn the balance, even though the objective has not yet been reached.

In this special case, the battalion commander should earmark part of his reserve to form a third echelon and act as a pursuit reserve (see Fig. 5).

The company and platoon have only the duty of gaining the battalion objective, nor have they the resources in men to render *division* into more than two bodies economically sound. Therefore, unless carrying out a small independent operation, the reserve should not be divided.

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CHAPTER VI

THE USE OF THE FRAMEWORK TO SOLVE GENERAL PROBLEMS OF ATTACK

PROBLEM 1. EXPLOITATION IN THE ATTACK AGAINST A DEEP SYSTEM OF DEFENCE

WE have dealt so far with the principles of attack on any one body or centre of resistance of the enemy. But in a large battle each infantry unit is only a subordinate working part—a mere cog—in a vast machine. A method is needed by which its action can be dovetailed with the movements of the other cogs and of the machine as a whole, so that the speed of the machine can be accelerated to gain every ounce of power. Co-operation between units of the same arm—even more than between the different arms—is the keystone of modern war. These subordinate units are the moving parts of the car—which is the whole force. The car itself, under the control of its driver—the general commanding—may alter its direction, vary its speed, change its gear, but the actual moving parts execute their share in a system comprising certain definite cycles of movement which are almost uniform. The essential to the smooth running and maximum speed of the car to its journey's end—the final objective—is that each moving part should run in harmony with the others and with the plan of the driver.

But the path to victory is a winding one, the car has to round many steep corners, and a differential is needed to compensate the movement of

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the respective wheels without friction, lest a side-slip ensue. Now that in battle the defence is distributed in depth it is rarely possible to estimate accurately beforehand at what points and moments the different units will encounter posts and defended localities of the enemy.

The attackers are often faced with the problem of breaking successive positions, each composed of an irregular series of posts, extending back in layers to a depth of several miles. It is reasonably certain that some units will encounter fewer posts and less resistance in their path than do others. A system is needed which will ensure that the speed and progress of the attack as a whole is not lost, nor friction developed between the moving parts, because of the delay involved in overcoming each obstacle in the path of the sub-units. The minor cycle of the sub-unit must be reconciled with the greater cycle of the superior unit, and eventually with that of the whole force.

The Expanding Torrent Method of Attack

We must employ a scientific system of attack which will reconcile and combine *surprise by speed with security.*

The breach must be *widened in proportion as the penetration is deepened,* by automatically progressive steps beginning with the platoon and working up to the brigade.

The broad principles of such a system I have endeavoured to deduce by examining and analysing Nature's method of attack.

If we watch a torrent bearing down on each successive bank or earthen dam in its path, we see that it first beats against the obstacle, feeling and testing it at all points,

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Eventually it finds a small crack at some point. Through this crack pour the first driblets of water and rush straight on.

The pent-up water on each side is drawn towards the breach. It swirls through and around the flanks of the breach, wearing away the earth on each side and so widening the gap.

Simultaneously the water behind pours straight through the breach, between the side eddies which are wearing away the flanks.

Directly it has passed through, it expands to widen once more the onrush of the torrent. Thus as the water pours through in ever-increasing volume the onrush of the torrent swells to its original proportions, leaving in turn each crumbling obstacle behind it.

Thus Nature's forces carry out the ideal attack, automatically maintaining the speed, the breadth, and the continuity of the attack. Moreover, the torrent achieves *surprise* and hence *economy of force* by progressively exploiting the weak spots of the defence.

By applying this natural system to battle we may deduce these rules for the attack against defence in depth :—

i. The forward sub-unit which finds or makes a breach in any of the enemy's positions should go through and push straight ahead so long as it is backed up by the reserve of the unit.

ii. The units on its flanks whose forward bodies are checked should send their reserve sub-units towards and through the breach. These will attack the enemy in flank, destroy his resistance and so widen the gap.

iii. Meanwhile, the units in rear press through the gap and deploy (expand) to take over the frontage

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and lead the advance in place of the delayed units.

iv. The held-up units, as soon as they have accounted for the enemy opposing them, follow on as reserve units to support the new forward units.

(*N.B.*—If the forward units are able to clear away the enemy opposing them before the rear units have passed through the gap, they will naturally continue to lead the advance.)

Taking for example the company: it will often happen that one forward platoon is advancing whilst the other is checked by an enemy post or delayed in clearing it (see Plate 1). If the platoon which can advance is held back, the pressure on the enemy will be relaxed and the chance of exploiting success lost. The slackening of *speed* will lose the advantage of *surprise* and endanger the *security* of the plan.

If the platoon is allowed to go on alone, tactical unity will be lost and its flanks exposed to a deadly counter-attack. Neglect of *security by formation* will endanger the *personnel* and the *plan*.

The "Expanding Torrent" method is that:

i. The commander of the whole unit—the company—will follow **automatically** in the wake of whichever of his forward platoons is making quicker progress (see Plate 2).

ii. Then if the other forward platoon is checked or delayed in clearing up an enemy post he will push forward one of his reserve platoons diagonally through the gap between the two, to take over the frontage of the delayed forward platoon and lead the advance in its place (see Plate 3).

At the same time he may, if necessary or to save time, use his other reserve platoon to assist, by a flank attack, the held-up one to overcome its enemy.

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The moral effect of being outflanked is, however, often sufficient.

iii. Directly the enemy post has been cleared, the company commander follows on, with his present reserve platoons, to back up the forward platoons—old and new. The latter will at no time press on so far as to get beyond easy reach of support from the company commander (security by formation).

The order in which he uses his reserve platoons will depend on his judgment, based on his survey of the situation *after* passing through the gap.

(*a*) If he judges that the resistance facing his checked forward platoon is so strong as to call for his intervention, it will usually be best to launch his *leading* reserve platoon against the flank of the resistance. In this way the leading reserve platoon will roll back the near flank of the enemy, so facilitating the passage of the second reserve platoon on its way to take over the frontage and lead the advance.

(*b*) If, on the other hand, he judges the resistance to be weak, and unlikely to interfere with the passage of the "expanding" platoon, *speed* indicates that the leading reserve platoon should be used to take over the frontage and the task of leading the advance.

The company commander would be ready to repeat this method against each successive position of the enemy, thus ensuring the relentless momentum of the torrent (see Plate 4).

Likewise the battalion commander may infiltrate a reserve company through the gap made by an advancing forward company to expand the front and replace another forward company whose advance is checked or delayed.

It is by taking advantage of the unequal progress made by the respective forward companies—for flank blows or the replacement of delayed portions of his forward body—that the battalion commander

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exploits successive gains during the attack and maintains its momentum (*economy of force* by *concentration* and *mobility*).

Thus any gap in the defensive system will be progressively enlarged and deepened on the initiative of each successively higher commander.

This method by which the advance penetrates, expands, and sweeps on, while the backwash crumbles the cut-off islets of the defence, resembles in its automatic continuity the swift onrush of a torrent.

The battle tactics of infantry will become automatic and depend less and less on fresh orders from superiors in rear. Moreover, artificial topographical objectives will be restored to their right position as mere stepping stones in the advance. We shall fulfil the law of economy of force by concentrating our efforts on the only true objective—the enemy.

Thus we see that the respective phases of *Fixing* and *Decisive Manœuvre* will be carried out against each successive resistance, whilst the "expanding torrent" will ensure that the momentum of the attack is not lost by the delay caused by the clearing of these enemy defence posts.

A further advantage is that the units which lead the advance will automatically be those which have encountered the least opposition. This will mean that the leading infantry are those which are freshest and have the most ammunition. It will be far easier to supply extra ammunition to those who have fallen behind than to those who are leading the advance.

Finally, the expanding of the front of the advance rests with the immediately superior commander, thus ensuring that tactical unity is

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preserved instead of an unorganised dog fight to get forward, with each unit playing for its own hand.

The commander will be in the driving seat in control of steering wheel, throttle, gears, and brake, instead of, as at present, being to all intents left by the roadside after he has swung the starting handle.

Security demands that

i. No forward unit must, however, press on even if it finds a gap unless it has cleared, or made arrangements to clear, all enemy resistance within its frontage.

ii. In the case of the platoon, its commander must remember that his sections are not tactical units. They are not divisible and so are incapable of fixing and manœuvring simultaneously. They possess no reserve of their own, and therefore the platoon commander must use his own reserve sections to help any of his forward sections which are held up, before continuing his advance.

iii. The forward section, therefore, which finds or makes a gap should only make a bound as far as the nearest tactical point from which it can cover and hold open the breach. It will not move on until it sees the rest of the platoon coming on to back it up.

Encounter Attack.—In an encounter attack particularly this method is the way, indeed the only way, to fulfil *economy of force*. For it is reasonable to suppose that the enemy's position will be only vaguely known, and that the objectives therefore will be prominent ground features, not clearly marked trench defences. Thus the assaults will take place not against the objective itself, but against a series of suddenly discovered posts and centres of resistance *en route*. In such conditions the original forward units could not possibly have the strength or endurance to carry out assault after

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assault, apart from the delay and waste of time in reorganising them under fire after each assault. Thus common sense reinforces theory in suggesting as the natural method in an encounter attack this "expanding torrent"—*i.e.* a progressive cycle of replacements adapted to the resistance met with, the forward platoons delayed in clearing up and reorganising after a local assault being replaced from the company reserve, while the old forward platoons follow on to replace the latter in turn after the next local assault. The substitution is effected by a prompt backing up of the forward platoons that are making progress and then passing one of the platoons temporarily in company reserve round the flank of the platoon that is reorganising. Eventually the company in turn is replaced from the battalion reserve and follows on to repeat the exchange if required—the whole forming a repeated and alternating process throughout the attack against any defence distributed in depth.

If I have dwelt at some length on the detailed working of the "Expanding Torrent," it is because in "Infantry Training"—where this method, first put forward by me in 1920, receives the stamp of official adoption—the general execution is explained but the details are less clear.

Problem 2. Position of Commander

(*a*) **Previous to Engagement.**—Until a unit is committed to attack on a definite point, *information* is the first need, followed by *speed* and *concealment.* The commander should therefore move, during this period, with his forward body in order best to direct the movements of his unit and keep in touch with the situation in front.

Note.—The diamond, with its solitary leading

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point, facilitates this direction by the commander, and enables him to make the best use of any covered approaches. Hence it should also be used for all reserves and units in rear until they are, in turn, committed to a definite rôle.

(*b*) **Subsequent to Engagement.**—*Information for security* is, for the moment, less essential than the need to effect *surprise through manœuvre.* Moreover, the *security* of the commander's *person* is necessary for the good execution of his *plan.*

These considerations indicate that the commander, of all grades, should usually move with his reserve directly he has committed his forward body to an attack on a definite objective. He will thus be able to keep control of the course of the attack and influence it without delay at the decisive moments by the use of his reserve.

A common fault is for the commander to move roughly in the middle of his deployed unit, with the result that when he wants to use his reserve sub-units he cannot get hold of them quickly enough. *Direction* + *speed* indicate that he should move actually with, and at the head of one of the reserve sub-units.

Problem 3. Method of Movement

(*a*) **Until the enemy is located** *security* is the first essential. Hence in the approach each unit should *move by bounds.* In this method each body advances alternately, while the other is halted in a position from which it can cover, with fire, the moving body. The reserve, in an advance, will only bound as far as a position in rear of the forward body, from which it can cover the next advance of the latter.

Mobility, however, is only second to *security,* and

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the commander, who will be with his forward body, must take steps to ensure that the bounds are executed as briskly as possible to compensate for the periods of halting.

(*b*) **When the enemy is located** the need for *surprise* is greater than the need for *security*. The best means to *surprise* is *speed*, and therefore *continuous progress* should be aimed at, instead of movement by bounds.

(*c*) **When not in contact with any enemy forces** *mobility* is usually more important than *security*. If so, units should move in column of route along roads, with suitable distances between advanced and reserve, or main, bodies. If encounter is decidedly improbable or speed is so necessary that risks must be taken, a few trained scouts working wide on the flanks will give a degree of security. If there is need for more security, greater forward flank protection must be ensured, *e.g.* with a company as advanced guard, a platoon should move on each side of the road.

(*d*) **Movement of the Sections under rifle and machine-gun fire.**—*Speed* must be the predominant aim in the attack. Movement is the safety-valve of fear. The faster the pace of the advance, the briefer the period of strain and the less the time for reflection on the dangers around. But *speed* must be balanced by economy of force as regards the men's vigour. The pace must therefore be as quick as possible, consistent with the necessity that the men arrive at the objective not too exhausted to deliver an effective assault. If the distance to traverse is considerable, the men should move at a walking pace *until* the enemy's fire becomes so hot that short quick rushes are necessary. Rushes imply intermediate halts, during which fear can assert its influence and make the man

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disinclined to go on. If begun early they also lead to waste of ammunition, whilst they are always an indication that the initial momentum and much of the sting has gone out of the attack. On the other hand, to demand a slow steady advance at close ranges without firing is to strain the nerves unduly.

Hence we deduce that movement should be at a steady and continuous walking pace until within close range, and subsequently a series of quick rushes alternating with covering fire. Fire, in the latter stage, is necessary to beat down the hostile fire, provides a safety-valve, and is likely to be effective.

Security indicates that a long rush may be advisable across specially exposed stretches of ground or down a long downward slope devoid of cover.

Problem 4. The Flank on which to manœuvre the Reserve

The question is automatically decided,

i. If the neighbouring unit on one of your flanks is making quicker progress than you, move to that flank (*speed*).

ii. If one of your forward sub-units is making quicker progress than you, move to that flank (*speed*).

iii. If smoke is used; go round the windward flank normally (*concealment*).

If the question is not automatically decided in one of these ways :—

Survey the ground personally and choose the flank which affords the most covered approach and the maximum advantage from all covering fire (*concealment and concentration*).

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Problem 5. The Use of Ground

Ground has two principal uses: to *surprise* the enemy by the concealment of your own advance, and to gain *security* from the enemy's fire.

These two ends are attained by means common to both, *i.e.* concealment of movement and rapidity of movement.

Before and throughout an action every infantry leader should study the ground and note its features from the point of view of *direction* under the following heads:—

i. *Formation:* Ground open to hostile fire.

If this must be crossed, a dispersed formation should be adopted before quitting cover, and the exposed area should be crossed either by a rapid bound or by rushes under covering fire.

ii. *Information:*

Ground likely to give the enemy observation of the advance.

iii. *Information and co-operation:*

Ground giving a good view of the enemy which affords good fire positions for covering your own advance or that of other troops.

iv. *Co-operation:* Lines of approach which facilitate your support by machine guns and artillery.

v. *Speed:* Lines of approach which will facilitate quickness of advance or manœuvre, and those which on the contrary will hinder the advance so much as to counterbalance any advantages of concealment which they offer.

vi. *Concealment:*

(*a*) Concealed lines of approach which enable ground to be gained towards the enemy, or which afford the chance of outflanking and surprising the enemy.

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(*b*) Dead ground, concealed from the enemy's view or fire, which can be gained by rapid movement or from which an assault can be delivered.

Problem 6. Respective Rôles of Rifle and Lewis Gun Sections

In the normal case where the ground is fairly open, *speed* and *concealment* indicate that the more mobile and dispersed rifle sections should be used for manœuvre, whilst the less handy Lewis gun sections, which present a larger target, should be used to advance direct on the enemy and to cover the attack with their fire.

They should work forward alternately by bounds—not by short rushes, which prevent accurate fire. But by the time the assault is delivered they should have worked close to the enemy post. Fire alone from stationary positions will not suffice to draw the enemy's attention away from the rifle sections. Further, if the Lewis gun sections stay back there will be a long delay in reuniting the platoon after the assault. If no good fire positions exist nearer than, say, 600 yards from the enemy front, the company commander may find it wise to relieve the Lewis gun sections of the forward platoons by some from the reserve platoons, in order that the covering fire may be kept up without holding back the forward Lewis gun sections.

Where covered approaches are available, *concentration* suggests that the rôles should be reversed and the Lewis gun sections used for manœuvre because of the greater surprise and enfilade effect of their fire.

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Problem 7. The Employment of Fire

The purpose of fire is to hit the enemy, and at the same time to guard your own men from loss.

In attaining this double aim, two factors must be combined. Whilst the essential object is to *concentrate*, in the wider sense, the maximum volume of fire upon the enemy, this consideration must be reconciled with *security* as regards the supply of ammunition.

Economy of fire-force demands that fire must only be opened when it will take effect on the enemy, which means that it should be reserved until the men can see individual enemies. In practice, however, the experience of the battle-field has shown that the normal man can rarely be restrained until such a stage is reached. The instinct of reprisal overcomes his fire-discipline. The remedy lies in movement. So long as the leader keeps his men moving towards the enemy they will not open fire. Let them lie down for a moment and the desire to fire combines with the facility to fire; the result is an unprofitable expenditure of ammunition.

Concealment indicates that fire should not be opened by a unit until its presence is discovered by the enemy.

Speed indicates that the attackers should advance without firing until the enemy's fire becomes so hot that further progress cannot be made without beating it down, or that it will render the rate of advance so slow that the opening of fire will increase rather than delay its speed.

Concentration indicates the use of *rapid fire* at moments when a maximum effect is needed within a minimum period of time.

Examples of such occasions are: At close ranges

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when a brief halt is made to beat down the enemy's fire, or as a final preparation for the assault; when pursuing an enemy with fire; when meeting a cavalry attack; to deceive the enemy as to the strength of a fixing attack which is made with weak numbers.

Short bursts of rapid fire, followed by pauses, favour observation of results and give time for adjustment of sights. They also help to preserve the leader's control of the fire. The frequency and duration of bursts of rapid fire will be governed by the ammunition available, the likeliness of further supplies and the extent of the task which is still to be fulfilled.

Surprise through direction indicates the use of *oblique* or *enfilade fire* whenever possible. The moral effect of fire which comes from an unexpected direction is far greater than that of frontal fire, whilst the target presented is usually more exposed and vulnerable.

Information.—Observation of fire is essential if effect and economy of fire-force are to be achieved. In case of uncertainty as to elevation, it is better to under-estimate than to over-estimate the range, as ricochets often take effect.

Problem 8. The Use of Smoke

Smoke has two principal uses: to *surprise* the enemy by the concealment of your own advance and to gain *security* from loss by blinding his observation.

Direction.—Smoke grenades must be fired to windward of the point to be blinded. When blinding a definite point they must be fired at the enemy—not in front of the attacking infantry. A flank wind is best in this case. In the case of a head

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wind the smoke grenades must be fired sufficiently far beyond the enemy to ensure that they do not leave the enemy in the light whilst blinding the attackers.

Formation.—Smoke can be put down *protectively* to cover movement over open and exposed stretches of ground, or to screen an exposed flank so that you can push forward.

Information.—The enemy should be blinded by a screen, so that his fire is unaimed, whilst behind it your own movements can be carried out in full light.

As smoke of necessity obscures your own observation and hinders your fire it should only be used to cover movement, and not when halted.

Co-operation.—Smoke can often be used to blanket the enemy's fire and expose him to a flank attack. This method economises ammunition and so aids economy of force.

Speed.—Smoke facilitates rapid movement without the delays necessary in the case of covering fire.

Concealment for security.—The manœuvring body must be careful during its outflanking movement not to get outside the limits of concealment by the screen.

Concealment for Surprise.—The reserve should endeavour to approach and assault the enemy's position from a rear flank, or some other direction least likely to be anticipated by the enemy.

Problem 9. Position Warfare

Security of supply is easier, and *surprise* in *direction* and *time* more difficult to achieve.

Thus fire power can be increased, whereas manœuvre is restricted. Success will therefore depend in greater measure on the mechanical fire

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power supplied by tanks and artillery, and less on the movement of the infantry. The increased strength of the defence can only be effectively countered by an augmented quantity of the mechanical arms.

The number of infantry deployed on any given frontage must not be increased, nor their intervals reduced. Such an uneconomical method will only increase their casualties without any compensating advantages.

Economy of Force.—As there is less chance of surprise, or of being surprised, greater strength should be allotted to the forward body than in a normal attack. *Fixing* will be mainly fulfilled by the other arms, so that three sub-units may well be forward in order to take instant advantage of the opening made by mechanical fire power for delivering a decisive assault.

Information will principally depend on the air and intelligence services. The infantry must endeavour to supplement this by observation and probing.

i. Observation will be effected from infantry observation posts and by patrolling during darkness or mist to examine the enemy defences and wire.

ii. Probing will be effected by raids and fighting patrols. For purposes of information fighting patrols are usually preferable to raids, as they can be more frequent, suffer less loss, and alarm the enemy less.

Formation.

i. When the enemy's front trenches are very close, the forward infantry units should be withdrawn to such a distance as to avoid danger from our own bombardment prior to the attack.

ii. When there is a likelihood of the enemy

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putting down a protective barrage in front of his positions, the forward infantry battalions should be closed up, with only a few yards between the platoons and companies. They should pass through the barrage danger zone at a rush, opening out again on reaching the enemy's trenches.

iii. Against intricate hostile positions likely to contain numerous dug-outs, it is advisable for the forward company commander to detail beforehand one reserve platoon to clear these. This is necessary because the forward platoons must on no account fall behind the barrage, as might happen if they waited to clear dug-outs.

iv. In the platoon it will usually be best to dispose the rifle sections forward, and the Lewis gun sections in rear to cover with fire or smoke the flanks of the forward sections, or to deal with any stray enemy who emerge from cover after the forward sections have passed on.

Co-operation.

i. The intervals between the forward sections when assaulting a trench should be covered by the reserve sections, either by fire or by blinding them with smoke.

ii. When following a barrage, infantry must keep as close to it as possible. The danger from the enemy is far greater than that of an occasional short burst from our own artillery. It is essential that the forward infantry should assault each enemy position immediately the artillery have lifted off it and before the enemy have had time to man their defences.

Speed.

i. Should the forward sections by any chance fall behind the barrage, they *must* fight their way forward by the use of their own weapons.

ii. Communication trenches should be cleared

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by sections moving above ground on either side, and shooting down into them. It is fatal to the momentum of the attack for infantry to attempt to fight their way through trenches.

Concealment.—As surprise in direction is almost impossible of achievement, the question of cover is of less importance.

Direction and Concentration.—In choosing the line of attack, therefore, more weight must be given to considerations which facilitate the action of the other arms and less to the possibility of cover.

Problem 10. Close Country

Surprise is easier to achieve, whereas *security*, to plans particularly, is more difficult to ensure.

The two factors principally affected are higher control and auxiliary fire support. The increased difficulty, and resultant loss, of higher control calls for greater initiative on the part of platoon and company commanders. The restricted field of view and fire reduces the effectiveness of artillery support, whilst the movement of both artillery and tanks is slower and more difficult. Infantry must therefore rely more on its own resources, particularly the machine gun.

Economy of Force.—A larger proportion of the unit should be allotted to the reserve in order to exploit a surprise penetration or to guard against a surprise counter-attack.

Direction.—The objective can rarely be kept in constant view. The bearing of the objective must be made known to all officers and section commanders beforehand, and they must take compass bearings frequently throughout the advance.

Co-operation is more difficult but more essential.

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Increased use should be made of observers and patrols meeting at prearranged points.

Information depends more on infantry reconnaissance, as the enemy can conceal their dispositions more easily from the air. As observation is more difficult, however, the reconnaissance must be fuller than usual. The whole breadth of the frontage must be covered by scouts or patrols.

Formation and Concentration.

i. Frontages should be reduced in order to cover them adequately. This does not violate the essential of having ample space for manœuvre, as the defender's field of fire and view is restricted, so favouring penetration unseen by him.

ii. Distances should be reduced. Reserves should move closer to their forward bodies in order to keep touch, with a view to quick manœuvre or exploitation of a surprise penetration. The defender's restricted field of view and fire enables this to be done without increased risk.

iii. The close protection of all units by scout sections or patrols is more essential than ever because of the risk of ambush or a sudden surprise fire from the defenders. Units must keep closer to their scouts to prevent these being surprised in detail and destroyed.

iv. Deployment may be made later.

v. Reserve platoons of the forward companies, and the reserve companies should move in platoon columns as long as possible.

vi. The use of arrowhead and file formations instead of the extended line is the best guarantee against the increased tendency to confusion.

Concealment is greatly facilitated.

i. Fire should be withheld until it is certain that your actual unit has been spotted by the enemy.

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ii. *When debouching from a wood*, the infantry should first halt to reorganise and then advance from the wood at a concerted rush in order to avoid fire ranged on the edge. If, however, the infantry can follow on the heels of the retreating enemy, they should do so without pausing.

Speed is inevitably reduced by the difficulty of movement in close country or woods.

i. Rapid exploitation and lesser deployment will compensate for less rapid movement.

ii. Instant readiness to open fire is essential.

Problem 11. Night Operations

The principal purpose of night operations is to *surprise* the enemy *by concealment*, and incidentally to obtain *security—to plans* from air observation and *to personnel* from air bombing or machine-gun fire.

Night operations fall into three categories: Marches, Advances, Assaults.

a. General

Direction.—Compass bearings to be given, and routes marked as far as possible.

Information:

i. Thorough reconnaissance in daylight beforehand.

Formation as *concentrated* as possible.

Co-operation.—Password arranged, and all troops to wear some distinguishing mark.

Concealment:

i. Magazines charged but no cartridge in the breech.

ii. No one to fire without a distinct order.

iii. Absolute silence and no lights when within possible view or hearing of the enemy.

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iv. Accoutrements securely fastened.

v. Men to break step.

Speed will inevitably be slow, and this must be allowed for.

b. Night Marches, Additional

Direction :

i. Local guides should be procured where possible.

ii. Side turnings blocked by tree branches, whitened stones, or ropes.

iii. Destination to be some easily recognisable landmark, or described in detail in orders.

Concealment :

i. Outposts should not be withdrawn until the main column has moved off.

ii. Fires should be banked and left burning.

c. Night Advances, Additional

The object is to gain ground from which a further advance, or an assault can be made at daylight.

This is the best means of achieving surprise on a large scale. The actual attack may begin just before dawn so that the enemy's forward positions are stormed by surprise, while the later stages of the attack can be developed in good order by daylight.

Direction.—

i. Compass bearings for each platoon.

ii. Guides where possible.

iii. Features which stand out against the horizon noted for reference.

Formation.—After passing any obstacle or defile, the unit should proceed its own length beyond ; and then halt until the rear of the column is closed up.

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d. Night Assaults

Night assaults, owing to the risk of confusion and limitation of movement (handicaps to *security* and *mobility*), have not the same comparative advantage as before the introduction of smoke. Hence they should be restricted to raids or attempts to capture special tactical localities.

At the same time darkness enables *surprise in time*, unlike smoke which warns the enemy, as well as *in direction and concentration.*

Direction :

i. Starting lines taped out beforehand parallel to objective.

ii. A creeping barrage is the best guide.

Formation.—Fixing is effected by the darkness, and the decisive manœuvre is achieved by the forward troops. Therefore only a small reserve, if any, is required, and so *at least* three sub-units should be forward.

Concentration.—Deployment into section columns, unless compelled earlier by fire, should be delayed until a position is reached from which the objective can be rushed.

Concealment.—The bayonet is the best weapon. Rifle fire locates the attackers and is seldom effective.

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CHAPTER VII

INFANTRY IN DEFENCE

THE defence is simply the attack halted. **Any unit which halts its advance is capable, on account of its open and self-contained formation, of offering an immediate resistance to any hostile attack or counter-attack.**

It only remains for it to consolidate the ground within its area so as to gain the most cover and best field of fire.

Once we have grasped this obvious truth the whole problem of tactics in general, and defence in particular, will be vastly simplified. Further, it suggests that our previous method of treating each tactical action in watertight compartments was both complicated and unscientific.

From this realisation that defence is the attack halted, we deduce the truth that the same governing principles and the formula of *fixing* + *decisive manœuvre* are applicable to the defence as to the attack.

THE OBJECT

In the case of the subordinate infantry unit, the degree of resistance to be offered will be the same whether the object or mission of the superior commander is active defence to weaken

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the enemy preparatory to launching a counter-offensive, or passive defence—usually to gain time for another part of the force or army to act. Resistance must be to the last man and the last round, except in the case of delaying action by means of manœuvre.

Outposts are simply a temporary form of defence, and should not be thought of as a watertight compartment. They form the outstretched arm of any force, not in contact with the enemy, which has halted. Hence security is the main consideration, to the troops' rest in particular. The two factors which modify the details of execution as compared with defence proper are :—

i. The defensive attitude is normally assumed for a short time only—usually during the hours of darkness.

ii. Contact with the enemy is not always probable.

As economy of force by rest is all-important, collision with the enemy should be avoided if possible.

ECONOMY OF FORCE

The actual distribution in defence will depend mainly on the frontage and the field of fire. Two sub-units forward and two in reserve will be normal, but if the field of fire is restricted it will be best in the case of a company or platoon to place three sub-units forward and one in reserve. The essential need is to cover the whole front of the battalion sector with intersecting rays of fire from the posts of the sub-units.

Outposts.—Unless contact with the enemy is likely the main consideration is to rest as many troops as possible. Hence units should usually

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be disposed with only *one* sub-unit forward and three in reserve (*formation*). It will suffice, particularly at night, if the main channels of approach are covered by the forward units (*information*). Machine guns sited to sweep all approaches should be used to balance the reduced numbers of men (*economy of force*). With this reservation the disposition and routine duties of outposts will be similar to those for defence in mobile warfare. Only the first stage of consolidation, that of disposition over the ground for observation and resistance, will be needed. *Concealment* in order to see without being seen is the first consideration.

PREPARATORY ACTION

GUARDING

SECURITY BY FORMATION

The formation will be generally similar to that for the attack. The battalion, company and platoon will each be divided into a forward body and reserve.

i. The forward body will consolidate a defensive position of surveillance and resistance, disposed in depth and with its posts so sited as to support each other with fire.

ii. The reserve will consolidate a position in rear of the forward body and preferably to a flank if the ground is suitable.

The commander will normally be allotted, but otherwise will select, an area of ground on which to organise a defended locality. But it is well to emphasise that the defensive in mobile warfare is more often than not a sequel to a halt in the attack. Thus dispositions are taken up on an emergency basis and later modified and developed.

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Modified to suit the ground and the general scheme of defence; developed in strength and organisation. The sequence, therefore, is that when a battalion, company, or platoon halts it must first be disposed ready for defence, then consolidate, and finally improve the defences.

Security to plans indicates that (i.) the battalion and company, like the higher, commander should frame his dispositions with the aim of stopping the enemy in front of a definite line. This promotes fuller *concentration* of fire and of the defenders' efforts. (ii.) All forward, or fire garrison, platoons should consolidate in section posts in order to cover more ground with fire.

Surprise in Direction.—One difference in regard to the formation in defence will be that the reserves for manœuvre and counter-attack can be previously placed in readiness on a rear flank of the forward body. They should be placed to cover with enfilade fire the flank on which it is most likely that the enemy might break through. They should take up a position from which they can best sweep the breadth of their area with fire. Egress from it, for counter-attack, should be easy and under cover.

Surprise by speed indicates that in the case of reserve companies or platoons it will normally be advisable for them to consolidate in platoon posts so that they may be kept more concentrated ready for manœuvre.

General Problems

(*a*) **Siting.**—Maximum fire effect (surprise) combined with minimum exposure (security) should be the aim, while in the case of reserves the factor of cover for manœuvre (mobility) must also be weighed.

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The greater the artillery support, the more attention should be paid to the question of minimum exposure, as a short field of fire will suffice.

i. *Security by information* suggests that the foremost posts should be placed on a forward slope if possible. These posts should be well down the slope to give security to artillery and other observation posts on the crest.

ii. *Security to personnel* indicates that where the enemy are likely to have considerable artillery, the main positions of resistance should be placed on the reverse slope.

iii. *Security to personnel* also indicates that each unit in defence should be allotted an area to hold, and not a definite point. Thus if the enemy takes a defence post at a disadvantage, by crushing shell fire, smoke or manœuvre, the commander should use his initiative to quit the post and take up a fresh position on the flanks of the post so that he can out-manœuvre the attacking infantry.

iv. *Security to plans* demands that the flanks should, when possible, rest on tactical localities which are difficult for the enemy to attack.

Even if such a point can only be found on one flank, it will help the defender because he will know that the most likely line of attack is against the weaker flank and will therefore be able to post his reserve to guard it.

v. *Security to moral* demands that defended localities should whenever possible be sited to gain the protection of natural anti-tank obstacles (woods, rivers, marshes, etc.). This is a paramount factor.

The "Contracting Funnel" in Defence

Just as manœuvre is far superior to frontal attack, so manœuvre fire which enfilades the

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enemy from a flank is the most damaging both in material effect and to the attackers' moral. It represents the principle of *surprise*. Thus the defence should be so disposed as to develop their greatest fire effect to the flank. To this end it should be our aim so to dispose infantry for defence, that the attacking enemy is encouraged to penetrate into channels in which he can be raked by flanking fire.

One step towards this is to site our Lewis and machine-gun posts to support each other with fire, rather than to fire direct to the front.

Another is the placing of the posts of the reserves so that they fire mainly to a flank.

A third way is to *echelon* backwards the posts of the reserve platoons and companies along the natural channels of approach to form a gradually contracting funnel raked by fire. Thus the further the attacker penetrates the more resistance he encounters and the more confined becomes the space in which he can manœuvre.

A diagram of a battalion disposed for defence may make the idea clear (see Plate 6).

If we study such a disposition, it becomes apparent that the only effective counter to such defence is the continually "expanding torrent" system of attack.

(*b*) **Consolidation** (defence in mobile operations).

i. Requirements—first, that men can use their weapons; second, concealment from enemy; third, protection from fire.

ii. Use natural features (ditches, banks, shell-holes) first. If these are not available or unsuitable, dig slits.

iii. Low trip wires or obstacles placed round the post. Block approaches.

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iv. Improve cover and connect slits. Interval between men should be at least 5 feet.

v. Clear foreground.

vi. Take ranges to prominent objects.

vii. Deepen trench slits to 5 or 6 feet; the side towards the enemy to be as nearly perpendicular as possible.

viii. Cover up newly exposed earth when digging; use upper sods for this purpose and also foliage.

ix. Latrines and cooking places constructed under cover away from the post.

x. Avoid movement during daylight.

(*c*) **Deliberate construction** (when (*b*) evolves into position warfare).

i. Link up posts by communication trenches; these should be made with a short straight length where they enter the post so that the defenders can command them with fire.

Wire obstacles placed ready to block them.

ii. Before constructing a trench, reconnoitre ground, site trench and mark it by tapes.

iii. Wire must be under the fire of the post, and should be concealed in long grass, depressions, etc. Intervals between the posts to be protected by obstacles.

iv. *Trace* of trench to be irregular—to reduce effect of shells.

v. Traverses to be at least 15 feet thick.

vi. *Section* of a trench should be so dug that the man has 4½ feet of cover where he stands to fire. In dry ground 18-inch parapet; in wet soil according to water level, but dig as low as possible.

vii. Parapet at least 4½ feet thick and so sloped that firer can aim at ground level immediately in front.

viii. Communication trenches to give 7 feet of cover.

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ix. Trenches to be dug at sufficient slope to stand without revetting; normal slope would be 3 feet deep to 1 foot broad.

x. Berm of fully 1½ feet.

xi. All fire trenches to have fire steps front and back. Fire steps always revetted first.

xii. Attention to drainage. Unless natural fall of ground, dig sloping channels to sump-pits. Trench boards when possible.

(*d*) **Reliefs**—Usually made at night.

i. Obtain full information and receipts for everything handed over.

ii. Strict march discipline when moving up.

iii. If attack comes during relief, occupy nearest cover and get in touch with the nearest troops holding the position.

iv. Patrols to be sent out during the relief by the unit being relieved.

v. No post to be evacuated until relieving troops are in.

vi. Outgoing troops get on fire step; incoming troops form up behind. Change places on the word "Pass" from the section commanders. If trench is too narrow, incoming troops lie down on the parados, while section commanders change sentries.

vii. Immediately after relief, men should be told off to battle stations and occupy them until platoon commander has been round to inspect.

viii. Rendezvous arranged for every platoon being relieved.

Security by Information

Observation

(*a*) **Previous Observation.**—Preparatory reconnaissance will be carried out on similar lines to

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that for attack. Each commander both before taking up a definite position and during its occupation should study all available information, personally survey the ground and the possible ways of manœuvre, and send out company scouts on special missions.

Outposts.—It is particularly essential that outpost troops should get a clear mental picture of the ground near them before darkness falls. All commanders should point out to their subordinates the features of the ground in front. Commanders of reserve platoons and companies for counter-attack must reconnoitre and mark their routes of action before dark.

(*b*) **Battle Observation.**—*Sentries :*

i. One man in each section post; in platoon posts two will usually be sufficient. Doubled at night or in fog.

ii. Sentries never lie down at night.

iii. Sentries to know :—

(*a*) Direction of enemy.

(*b*) Extent of ground to watch.

(*c*) Position of section posts on right and left, of remainder of platoon, and of platoons on flanks.

(*d*) Names of landmarks.

(*e*) Action to take if they see anyone approaching, *i.e.* warn the post, challenge, take cover and get ready to fire. Shoot at once if order to halt is disobeyed.

(*f*) Particulars of any friendly patrols due to return through their posts.

iv. At night sentries in different position to that occupied by day. Next relief within reach of sentry's foot.

v. Rely on ears rather than eyes at night. Train men to detect different sounds.

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Reconnoitring Patrols :

i. If not yet in contact with the enemy they should be sent out to keep watch on all likely lines of approach.

ii. When in contact with the enemy, as in position warfare, they will be sent out at night, in fog, or in dense country by day, to keep his forward defences under observation, discover his dispositions, and give warning of a likely attack.

iii. They should usually be supplied by reserve units.

iv. In darkness or fog, patrolling is the best means of protection from surprise, and not the massing of more infantry in the forward positions.

v. Patrols *and observation posts* should be used by reserve units during an enemy attack to obtain information as to the situation in front and flank, and so enable instant and correct action to be taken.

Patrols must always be given a definite mission and told on what points information is specially required.

Reports on the situation must be rendered frequently by all commanders at fixed times, and when anything unusual is observed, however trivial it may seem.

Probing

When in contact with the enemy, information as to the enemy's strength, positions, and intentions will be obtained by raids and fighting patrols. The latter are usually more economic and equally effective if the purpose is solely to get information.

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THE COMBAT

I. Security through Fixing

(Guarding = Defence by Fire)

Defence in itself is one method of fixing the enemy. It is incapable of beating him, and therefore a defensive attitude will only be assumed in order to fix and weaken the enemy so that another force may be able to attack the enemy decisively elsewhere, or that you may yourself attack later when his vigour is spent.

In the actual infantry defence the phase of fixing is carried out by the forward body (fire garrisons). If the forward companies of a battalion fail to fix and break up the enemy's attack, it will be the duty of the reserve companies to fix him in order to allow higher formations to decisively manœuvre against him.

The rôle of forward units (or fire garrisons) is stationary defence by fire.

Security to plans demands that forward units holding positions should defend to the last man and the last round the area allotted to them.

To instil this idea that troops who have consolidated should not withdraw, fighting patrols should be detailed from the reserve if it is desired to harass the enemy's attack before the main positions of resistance are reached. Troops who have consolidated are more likely to hold on too long, and so if allowed to withdraw would mask the fire of the posts in rear when they fall back.

Security to personnel indicates that, if the attack is preceded by a heavy bombardment, all men should remain under cover except the sentries. Shelters, if constructed, must be such that the men

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can quit them immediately to man their fire positions.

Security to morale indicates that the section commander should quit the actual post and take up a position on its flank, if the enemy take it at a disadvantage by shells, smoke, or manœuvre.

Thus when the enemy rush in they will find themselves enfiladed from a flank (surprise in direction).

Forward Surprise :

i. In concentration of fire will also be achieved by withholding fire until the enemy have advanced to close range, and then greeting them with a heavy and prolonged burst of fire. Rapid fire may be suitably employed for this purpose, and also to deceive the enemy as to your strength. Fire at long ranges is only advisable when the aim is to gain time by a *delaying* action.

ii. In speed, by forward platoons remaining fully equipped and in constant readiness to meet attack.

Co-operation.—In defence, as in attack, the fire of artillery will often *fix* the enemy, and so create the opportunity for counter-attack. Every infantry leader must be on the look-out for such chances and seize them directly the burst of artillery fire lifts.

Co-operation (internal) :

i. To fulfil the common mission, will depend on the disciplined initiative of each subordinate commander.

ii. Between the sub-units, will be effected by liaison patrols and observation posts.

II. Decisive Manœuvre (Hitting = Defence by Counter-Attack)

The reserves of any unit carry out the decisive manœuvre in defence, as in attack.

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If the enemy makes a gap or effects a lodgment in the positions of the forward body, the reserve will make an immediate counter-attack to throw him back, or act by fire to prevent further penetration, close the breach and destroy the enemy in a contracting funnel.

The function of its commander is manœuvre, which does not necessarily imply assault.

The commander of a reserve company or platoon has a choice of two main alternatives :—

i. If the enemy break through the forward positions quickly and on a broad front, it will be best for him to man his prepared positions to take the enemy in flank by fire.

ii. Otherwise he should manœuvre either to assault or fire.

Security to plans.

i. A counter-assault which fails is a sheer waste of force. Hence it should not be launched unless the enemy is engaged with other defending units.

ii. A counter-attack by any unit smaller than a platoon is rarely effective. Hence fire and not counter-assault is the best course for manœuvre sections to adopt.

iii. A counter-attack will be carried out according to the same principles as for the attack, but a definite objective should be fixed for it, and it should never be pressed beyond the forward positions of the defence.

Surprise is obtained by:

Concentration + Direction.—i. If the company commander decides to manœuvre to fire he should move to suitable positions on the flanks of the enemy's breach from which he can enfilade them.

ii. Above all he must remember that whether he uses fire or assault, or both, it will be most effective if delivered against the flanks of the

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enemy's wedge of attack. In this way the flanks of the breach will be strengthened and his advance cut off.

Speed + Formation.—Gaps should be left in wire and other obstacles in the forward zone to allow free movement of reserves.

Speed + Information demands the use of observation posts from which the area occupied by the forward companies can be seen, and the development of the enemy attack watched. In this way the reserve company commander will be able to intervene at the right moment and without an instant's delay.

Speed + Co-operation.—As in defence the initiative rests with the enemy, the commander of a reserve company must act directly he thinks fit without waiting for orders from the battalion commander.

Speed + Direction.—The one great advantage which the defence possesses is that every move can be thought out, and should be rehearsed, beforehand. Every possible line of enemy advance should be reconnoitred and plans worked out for countering them. The possible routes of manœuvre and fire positions on them for each reserve company and platoon should also be reconnoitred and marked.

Speed + Concentration.—The reserve companies and platoons should if possible be concentrated under cover near their battle positions, but not actually occupy them. Delay will be caused, should the commander decide to counter-attack or manœuvre to fire, if his troops have to be extracted from entrenched posts.

Concealment.

i. The routes selected for counter-attack or manœuvre to fire should be under cover if possible. The proposed fire positions and the marks used to

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indicate the routes at night, must be carefully concealed from the enemy's observers.

ii. Ruses, such as dummy positions, should be employed to misdirect the enemy, waste his ammunition, and attract him into funnels in which he can be enfiladed.

III. EXPLOITATION

Exploitation in defence takes the form of a counter-offensive when the enemy's attack has failed, and is therefore not true defence. It will be executed similarly to the attack.

Surprise in concentration of force indicates that in the exceptional case where the battalion is acting independently and its commander wishes to pass to a counter-offensive after the enemy's attack has failed, at least two reserve companies should be retained to deliver it.

Surprise in time will usually be fullest when the enemy's security of maintenance and formation is least.

The best moment for the counter-stroke will therefore usually be when the enemy appears to have expended his reserves and the vigour of his attack is weakening, unless a favourable opportunity occurs earlier.

Surprise in direction.—The attack should usually be directed against the enemy's flanks in order to threaten his line of retreat.

In the normal case the battalion will be holding merely one sector of the defensive position of a higher formation. If the battalion commander decides to detail only part of his reserve for manœuvre (immediate counter-attack), the other part,

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normally one company, will definitely hold the final position of resistance. On the alarm being given its battle position will be manned and held to the last man and the last round, fulfilling the same rôle of stationary fire defence as the forward companies.

If the enemy's attack has definitely failed, this reserve company may be used to relieve the forward or manœuvre reserve companies or to carry out a deliberate counter-attack on any point where the enemy has consolidated his lodgment.

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CHAPTER VIII

THE USE OF THE FRAMEWORK TO SOLVE GENERAL PROBLEMS OF DEFENCE

PROBLEM 1. RETIREMENTS

THESE are simply a mobile form of passive defence. Hence **security** + **mobility** are the determining principles.

i. Retirements should be carried out therefore by a series of leapfrog bounds, the forward body retiring covered by the fire of the reserve to a position behind it, from which, in turn, it can cover the retirement of the original reserve. Thus the strain of holding off the enemy will be evenly distributed between forward and reserve units. (*Security to morale* primarily.)

ii. In flat country and defiles, zigzag bounds should be used to avoid the risk that the fire of the covering body may be masked by the retiring body. (*Security to personnel* primarily.)

iii. If the enemy presses the retiring body too hard, a sudden counter-attack should be made by the reserve to relieve the pressure. (*Security to plans* primarily.)

A retirement is as a rule the most difficult of all tactical operations; its successful execution makes a greater demand on the judgment of the commander than any other form. The development of infantry weapons has, however, favoured the execution of *security* more than *surprise*. Although retirements by day are less difficult in

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comparison than they were, the delaying power of modern small-arm weapons is utilised even better to postpone departure until nightfall and thus to withdraw under cover of darkness.

Problem 2. Position of Commander

A change of position is impossible once the enemy has launched his attack, and therefore the commander in deciding his position should choose to be with that body which will the most require his direction and call upon his judgment. This consideration indicates that in the case of the company and platoon, the commander should be with his reserve in order to decide the moment for, and direct, the counter-attack. Manœuvre for surprise calls for greater judgment than fixing by fire.

In the platoon, a common mistake in training is for the commander to post himself in some central position instead of in one of the section posts—forgetting that in war there would be no one to dig cover for him, nor to defend him when an attack came. His rôle is to direct the defence, not to become a mere rifleman, save in emergency.

In the case of the battalion, *co-operation* with the other arms, particularly the artillery, is the paramount consideration in choosing the position of headquarters, which should be so placed as to be in close touch with the artillery commander in immediate support of the battalion.

A position in the neighbourhood of the rear company will often fulfil the dual requirements of control for surprise and co-operation for security. The situation of battalion headquarters does not tie down the commander personally, who will be free to go to whatever point he is most required.

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Problem 8. The Use of Ground in Defence

In defence, ground has two principal uses: to *surprise* the enemy, in *space and time* by concealment of your position and in *force* by occupying ground which commands the enemy's lines of approach; to gain *security* from the enemy's fire.

Ground features may be divided, from the point of view of the framework, as follows :—

i. *Formation :* Ground commanded by an attacking enemy from outside your position. This should be avoided in siting your positions.

ii. *Information :*

(*a*) Ground from which the enemy could gain observation of, or command, your positions.

(*b*) Ground which gives a good view of, and commands, the possible lines of approach of the enemy.

iii. *Co-operation :*

(*a*) Ground which enables the various infantry fire weapons to be combined to form a barrier of fire as strong and closely interlaced as possible.

(*b*) Ground which best ensures to infantry the support of their artillery.

iv. *Speed + Concentration :* Ground which facilitates the delivery of counter-attacks.

v. *Concealment :*

(*a*) Concealed lines of approach should be noted for counter-attack or withdrawal, and to guard against their use by the enemy.

(*b*) Ground concealed from the view or fire of an approaching enemy can be utilised to surprise the attacker.

Thus in deciding whether to site your position on a forward or rear slope, ii. (*a*) and (*b*) must be balanced with iii. (*a*) and (*b*), and with v. (*b*). The determining factor will usually be the probable extent of the enemy's *concentration* of artillery fire

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power. A forward slope, which fulfils ii. (*b*) and prevents ii. (*a*), is preferable for the forward posts, but if the enemy's artillery is powerful, it will be best to site the position of resistance on a near slope to avoid direct observation (enemy *information*).

Problem 4. Respective Rôles of Rifle and Lewis Gun Sections in Defence

In the case of forward, or stationary defence, platoons the question of *speed* does not arise. The paramount consideration is *concentration* (of fire power), and this, as well as *concealment for surprise*, indicates that the Lewis gun sections should be so disposed as to fire where possible to a flank, or at any rate obliquely. Moral reasons also suggest that the Rifle sections should be in the centre. It is more difficult to get several individual riflemen than a single firer to fire obliquely, the natural instinct being to fire at one's direct attacker.

In the case of counter-attack platoons, *speed* is the supreme consideration. It may therefore be best to let the Lewis gun sections fix by fire whilst the rifle sections manœuvre to deliver the actual counter-attack.

Problem 5. The Employment of Fire in Defence

The considerations brought out in discussing fire in the attack apply generally to the defence.

The maintenance of the ammunition supply is usually more *secure* and fire can therefore be opened at longer ranges if desirable. Save in the case of a delaying action, however, *concealment* indicates that it is usually better to reserve fire for closer ranges to achieve *surprise*.

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Problem 6. The Use of Smoke in Defence

As smoke is primarily the antidote to *information* and *concentration* (of fire power) it is dangerous to use in true defence. Smoke should only be used to cover counter-attack, withdrawal, or the arrival of fresh troops.

i. It can be used *just before* a counter-attack to blind the enemy's infantry. If fired too early it will draw fire (enemy information).

ii. In a withdrawal smoke, fired in short bursts, saves casualties, enables covering parties to remain longer on forward slopes, and allows troops to be withdrawn in closer formation and under better control.

Against enemy Smoke:

Security.—Fire short bursts of cross fire on suspected approaches. Patrolling should be carried out. Light signals for communication.

Surprise (as well as *security* to personnel and moral) indicates that the commander of any defence post or locality may quit it with advantage and take up a position on a flank or in rear, so as to catch the enemy unawares as he emerges from his own smoke screen.

Problem 7. Defence in Position Warfare

Security to personnel and moral.

i. As the enemy artillery's security (including supply) is easier and *surprise* by him more difficult, the forward position should be held more lightly than in ordinary defence, so that the number exposed to an enemy bombardment will be reduced. The extra strength of the positions will counterbalance the reduction in numbers. (Economy of force.)

ii. There can be little hope of baffling the

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enemy's *information* (air and intelligence) by *concealment* of the defences. Security from bombardment is therefore the first essential and will be obtained by wide and deep trenches and strong dug-outs. (Formation.)

iii. Mined dug-outs, or concrete blockhouses in the forward positions, should be constructed. (Formation.)

iv. A sentry must always be posted outside dug-outs containing troops to give warning of an attack or of gas. (Information.)

Security to plans.

i. A complete system of signal communication should be arranged, and cables buried as soon as possible. (Co-operation.)

ii. A minutely organised defence scheme should be drawn up and frequently rehearsed so that every unit commander and man will know his exact rôle and carry it out at need without confusion or delay. (Speed + Direction.)

iii. Troops must be constantly practised in manning their battle positions rapidly, by day and night. (Speed + Direction.)

iv. Deep dug-outs should not be constructed close to the enemy owing to the danger of delay in manning the fire positions if a surprise assault comes. (Speed + Concentration.)

v. The avenues of communication should be extended and improved. (Speed + Concentration.)

vi. All trenches should be named, those running laterally being called "trenches," and those from front to rear "avenues." (Direction.)

Problem 8. Defence in Close Country

Close country facilitates *surprise* and renders *security* more difficult. Therefore :—

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Object.—Close country favours delaying action, but not a protracted defence. The enemy's forward troops can be ambushed and surprised in detail, his early and time-wasting deployment can be compelled, and at the same time your own troops can be withdrawn under cover.

Economy of Force.—A sufficient proportion of the unit should be allotted to the reserve for local immediate counter-attacks, for which there are increased opportunities and increased need. The enemy has increased chances of effecting local penetrations, which are more dangerous owing to the difficulties of locating the limits of hostile gains and of checking their extension by his reserves.

Formation.

i. Frontages should be reduced to compensate for the restricted field of fire and view.

ii. Distances should be reduced. Reserves should be held closer in hand to prevent the enemy breaking through and to check quickly his initial penetrations.

iii. In deciding whether to occupy commanding positions in enclosed country, their increased field of fire and observation must be weighed with their disadvantage as an easy objective and artillery target for the enemy.

iv. In a wood, *security to personnel* indicates that the defence posts should be far enough from the front edge to avoid the enemy's artillery fire which usually ranges on the edge. *Concealment* (for surprise) indicates that the defence posts should be inside the wood rather than outside. Wide clearings must be made in order to obtain a field of fire and the posts must be sited to flank these clearings.

v. The entry of the enemy into the wood must

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be prevented by entanglements. (Counter to enemy *speed*.)

vi. Breastworks with a parados are normally more suitable than trenches in a wood, because the wood gives *concealment* but limits the field of *observation* for fire. In any case the space between parapet and parados must be very narrow to save casualties from overhead splinters of shells bursting against the branches of trees.

The question of the inclusion of a wood in the defensive position :—

(*a*) If it fits into the general scheme of the defence it should be held, because it hampers the enemy's *mobility* of attack, and provides concealment from which the defender's reserve units can be launched to a *surprise* counter-attack.

It should be remembered, however, that it will often be necessary to avoid holding tactical positions in the wood from fear of enemy gassing. In such cases it may be possible to deny the wood to the enemy by filling it with gas ; at the same time arrangements should be made to keep the exits from the wood under fire.

(*b*) If the wood is just in front of the line of defence, it should usually be held in order to deny it to the enemy. Thus you will frustrate his chance of bringing off a *surprise* at close quarters by *concealment*.

(*c*) If the wood is too far in front to be a serious threat to the defence, *security of formation* indicates that it should not be held. Care should be taken, however, that the forward defence posts, machine gun and mortar posts are sited to cover the exits from the wood with fire. Fighting patrols may be sent into the wood when an attack is imminent in order to harass the enemy's advance and hamper his *speed*. These patrols should be furnished

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from the reserve company, so that the strength of the forward positions will not be weakened.

Information (*see* Attack) + **Concentration.**

The foreground should be cleared to provide an effective field of view and fire, and so counter the enemy's increased chances of *concealment.*

Concentration.—The positions for the reserve units and machine guns should be selected so that they can sweep diagonal and transverse rides and clearings with enfilade fire.

Concealment.—The opportunities for surprise by fire are greatly increased. Full advantage should be taken of the ample cover to bring off small ambushes and surprise bursts of fire at close ranges against bodies of the enemy in close formation. The nature of the ground will enable the surprisers to make a subsequent safe withdrawal.

Speed.

i. Instant readiness to open fire must be ensured to balance the attacker's increased concealment of approach.

ii. The avenues of communication should be cleared to facilitate the quick lateral movement of the manœuvre units for counter-attacks against enemy detachments which effect a penetration at any point. *Time* is of greater importance than ever in the case of counter-attacks in close country and woods.

iii. The enemy's speed, however, should be hindered by blocking with entanglements the longitudinal avenues in front of the forward defence posts.

Summary

In all humility, it is suggested that by thus working out our principles of tactics upwards from

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the elementary, instead of downwards from the complexities of large operations, we can simplify infantry tactics to a flexible framework of clear principles which are applicable to all forms of action. This framework provides us with a sound base upon which to build up our practical knowledge of ground and weapons. It has been the hope and aim of the author to create the foundations of a true science of infantry tactics.

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APPENDIX

A SYSTEM FOR TEACHING THE ELEMENTS OF TACTICS

For a Platoon

N.B.—A director should be appointed. He will usually be the platoon commander, but in the final exercise the Company Commander or other officer should direct.

I.—"Security" Demonstration

Object.—To demonstrate the need and use of an "outstretched arm" (advanced guard or forward body) at all times when fighting is possible.

Explanation.—The director explains that in war we are always in the dark as to our enemy's exact position and movements until we get to grips with him. Even when we sight him it is no guarantee that we have discovered his main force, and therefore we must always be prepared for a "surprise packet." Thus the conditions in war resemble those of two men trying to find and fight each other in the dark.

Action. (*i*).—The director selects two men. He blindfolds them or makes them wear smoked glasses.

(*ii*).—He then places them a few yards apart and orders them to find and grapple with each other.

(*iii*).—Each man will automatically stretch out his arm or arms to feel for his opponent and to guard himself from surprise.

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Lesson Learnt.—The director points out that just as each "man in the dark" stretched out an arm, so in war every body of troops, moving or halted, when there is the slightest possibility of encountering or being surprised by an enemy, should throw out a portion as a forward body or advanced guard in the probable direction of the enemy (*division*). He should further point out that such a formation of security must be invariably adopted by every unit from a section upwards. With the larger units each portion also may itself be opened out to avoid being surprised or to diminish loss from hostile fire (*dispersion*).

By adopting such a formation of security the body as a whole can never be surprised and overwhelmed. The portion which first encounters the enemy must engage him, however strong he may be, in order to afford time for the remainder to act.

II.—"Fixing and Decisive Manœuvre" Demonstration

Part 1. *Action* (*i*).—The director details a man (preferably a big one) to represent the enemy and places him in front of the platoon.

He then details two smaller men to represent the attacking side, one man advancing in front as a forward body and the other following him as a reserve.

(*ii*).—The director then tells the forward man to go straight for the enemy. As soon as the forward man is at grips with the enemy, the director tells the second man to attack the enemy from behind or in flank, and to deliver a knock-out blow.

If the enemy tries to turn and face his new attacker, the forward man will seize the opportunity to rush in and deliver the knock-out blow instead.

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Lesson Learnt.—The director points out that our formation of security applies equally during the actual attack. For in the attack by large forces each group of units carries on its own little battle with its own local enemy.

That in the case of any unit attacking an enemy defence post, the forward body advances direct on the post to reconnoitre it and fix the enemy's attention so thoroughly that he leaves a blind side open to the manœuvre body (reserve). This body must work round his flank and then rush in to assault him while he is engaged with the forward body.

Should, however, the defender turn to meet the new attack the forward body must seize the opportunity and carry out the assault. This initiative and team work can only be developed by the careful training of the section commanders in peace time.

Part 2. *Action.*—The director then repeats the demonstration, but tells the forward man not to try to close with the enemy, but merely to feint at him. The defender promptly disregards the forward man and turns to knock out the manœuvre man.

Lesson Learnt.—The director points out that unless the forward man goes for the enemy for all he is worth, the manœuvre is useless, and the defender can deal with each attack separately. Both bodies must *close* with the enemy.

Part 3. *Action.*—The director then places the forward man in a position of defence and makes the enemy attack him. While he is attacking the forward man, the manœuvre man again rushes in on his blind side and knocks him out.

Lesson Learnt.—The director points out that the same formula of *fixing* plus *decisive manœuvre* applies equally to defence as to attack. That in battle the forward body of a unit should

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fix the attacking enemy with fire while the reserve counter-attacks from an unexpected direction.

III.—Attack Drill

Two sections will be used for this, while the other two watch.

Explanation.—The director details one as a forward section, and the other as a reserve section. He arranges for an enemy-defended post to be marked out in the distance by placing there men with pole targets, and an arrow on a stick to represent the direction of fire of a machine gun. If time does not permit of this, he points out some natural landmark as the imaginary defence post.

He explains that the forward attacking section would normally throw out a pair of scouts to guard itself from surprise and to find the most covered route of advance (*security by information*), but does not actually detail them in order to avoid complicating the lesson.

Each section then moves off in file with arms slung, the reserve section following about 100 yards in the rear of the forward section (*security by formation*=division).

Phase 1

The director gives the cue (or prearranged signal): "Platoon comes under rifle and machine-gun fire."

Action	*Lesson Learnt (and checked by the Director)*
Each section commander orders his section to form "arrow-head" (Λ) if he is passing over open ground or "worm" (single file) if he is advancing up a defile (*e.g.*, hedge, ditch).	*Security by Formation* =dispersion. Each section commander to change from one formation to the other according to the successive types of ground he advances over. He either gives the

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Each man unslings his rifle and brings it down to the trail.

order "Fan out," or "Close."

Phase 2

Director gives cue :—" Platoon comes under heavy fire."

Action

Section commanders continue their advance by rushes. Forward section works towards the enemy post. Fire withheld until they can actually see an enemy. Section commander then gives a fire order between each rush and sees that his men carry it out.

Reserve section moves out to a flank so as to get round the flank of the enemy post. The section commander moves his section by rushes as long as he is on open ground in view of the enemy post.

Lesson learnt

Forward surprise by speed. Quickness in getting up and down. Section commanders to first pass the word " prepare to rush," whereupon men draw up one knee to get a quick start, while still keeping flat on the ground. Steady pace, section commander leading. Halts to be at best cover and, later, fire positions.

Surprise through manœuvre. Section commander to seize moments to rush in open when forward section is firing (*co-operation*).

Phase 3

Cue :—" Fixing, manœuvre, and decisive assault."

Action

The forward section works ever closer to the enemy post, and fixes it with fire or smoke.

The reserve section works round by the most covered route to a flank or rear of the enemy post. It then assaults and captures the post. The forward section continues firing until the

Lesson learnt

Security through fixing. The use of smoke to economise ammunition, placing it to windward.

Use of covered approaches, fire withheld until spotted by the enemy, to gain *surprise by concealment.*

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reserve section actually reaches the post.

N.B.—As an alternative the director may give the sub-cue "Enemy concentrates their fire on manœuvring section." In this case the manœuvring section endeavours to fix the post with fire and beat down the hostile fire, while the forward section seizes the opportunity to work closer and then assault the defence post.

Interchangeable rôles (*co-operation*).

Phase 4

Cue :—"Readiness for resistance or further advance."

Action

Directly the sections have captured the enemy post, and mopped up its imaginary defenders, they automatically redistribute themselves in their original formation, the forward section in front and the reserve section behind. The men lie down ready to fire, if counter-attacked.

Lesson learnt

Defence is simply the attack halted. The unit must at all times, except during the decisive assault, be in a *formation of security*. The sections are thus ready either to resist or to continue the advance, and each section can support the other (*co-operation*).

IV.—Attack Exercise

For a Platoon

Explanation.—The director selects a battalion objective on the map. He then marks out, with pole targets if possible, one or more enemy-defended posts within the platoon frontage and between the starting-point and the battalion objective. He points out the battalion's objective on the map to the platoon commander, and indicates the general line of the platoon's advance.

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He informs him that his is a forward platoon of one of the forward companies of the battalion and that he must fight his way to the battalion objective.

Phase 1

Cue :—" The Start."

Action	*Lesson learnt*
The platoon commander issues his orders and explains the rôle of the platoon to the section commanders.	Every subordinate to know his rôle and that of his neighbours, for *co-operation* to attain common goal.
The platoon moves off in fours, with arms slung, across country in the direction of the objective. A pair of scouts are sent ahead from the leading section. They move by bounds about 200 yards ahead of the platoon, but one of them must keep within sight of it.	*Security by formation and information* to prevent surprise and find most covered route of approach.
At the end of each bound one scout remains observing while the other signals back " All clear " or the reverse.	*Information by observation.*

Phase 2

Cue :—" Platoon comes under Artillery fire."

Action	*Lesson learnt*
Platoon commander makes a " deploy " signal. Nos. 1 and 2 section commanders lead their sections out at the double to left and right respectively, until they are 100 yards ahead of Nos. 3 and 4, and at 100 yards' interval from each other.	Open out to avoid loss from fire. Nos. 1 and 2 become forward sections and Nos. 3 and 4 become reserve sections. *Security by formation*=division and dispersion.
Nos. 3 and 4 section commanders lead their sections out at right angles to left	The section leaders learn to keep *direction* and in their relative position, over broken ground.

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and right respectively until they are at 100 yards' interval from each other. Directly they have shaken out from the platoon column each S.C. gives the order to form file, and continues the advance in quick time. Scouts now withdrawn, as the deployed sections themselves now give ample security against surprise.

Security by formation. Restore the fighting unity of the sections (*concentration = economy of force*).

Phase 3

Cue :—" Platoon comes under rifle and machine gun fire."

Action	*Lesson learnt*
Each section commander orders his men to form " arrowhead " or " worm " according to the ground he passes over. Each man automatically unslings his rifle and comes to the trail.	*Dispersion.* Vary formations instantly according to the ground, but do not stop to fire until necessary.
Scouts do not return fire. They watch and locate the firers (pole targets, etc.).	Aim at *surprise*, so reserve fire.

Phase 4

Cue :—" Platoon comes under heavy fire."

Action	*Lesson learnt*
The forward sections continue their advance by fire and movement (rushes).	Open fire only when your immediate enemy can be seen and further advance is impossible without firing to keep enemies' heads down = *surprise by speed*, and economy of ammunition.
Each forward section rushes alternately covered by fire of the other section.	Section commander who is going to advance should seize opportunity when other

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The reserve sections, directed by the platoon commander, follow on by the most covered route or by rushes across open when forward section is firing.

section is firing (*co-operation*).

Direction balanced by *security* and *surprise*.

Quickness in getting up and down helps to gain *forward surprise by speed*, and *security* to personnel.

Phase 5

"A soft spot is found"

Cue :—"The forward sections are held up, while the imaginary platoon on the right or left is still able to advance."

Action	*Lesson learnt*
The forward sections fix the enemy post with fire, working gradually closer to it.	*Security through fixing*=to thoroughly engage the enemy's attention, which means not only firing but working closer all the time.
The platoon commander signals to his reserve sections to move to the flank where the other platoon (imaginary) is still advancing.	*Surprise through manœuvre.*
He leads them through the sector of this platoon until they have arrived on the flank of the enemy post which is holding up their own forward sections, whereupon the reserve sections turn inwards and advance, under cover if possible, against the enemy post.	Use of cover (*surprise by concealment*).

Alternative Phase 5

One forward section is checked or held up while the other finds a covered approach through which it pushes past a flank of the enemy post. It makes a short bound to any position	Eye for ground (*direction*).
	Security by formation.

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from which it can command and hold open the gap it has made, and takes up a fire position on it.

A bold jump into a gap will frighten the enemy.

Directly the platoon commander sees that one of his sections is advancing while the other is checked, he signals to his reserve sections to follow the advancing one.

Automatic initiative to *exploit* a "soft spot" and maintain the momentum of the advance

He leads them through the gap and then turns inwards against the flank of the enemy post.

Surprise through manœuvre.

Phase 6

Cue :—" The assault of the defence post."

Action	*Lesson learnt*
The manœuvring sections do not open fire unless the director gives them the sub-cue that the enemy have spotted them. The forward sections blind the defence posts with smoke. The manœuvre sections rush in and assault the defence post.	*Surprise* doubles the weight of the attack (economy of force). *Co-operation.* *Security through fixing* and *surprise through manœuvre* combine to give decision.

Phase 7

Cue :—" The Platoon mops up and continues the advance."

Action	*Lesson learnt*
The forward and reserve sections mop up the defenders, reorganise and open out automatically to their original formation. They then move forward towards the original battalion objective. The pla-	*Security by formation.* *Direction and co-operation.*

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toon commander sends a report to his company commander.

(If the alternative Phase 5 was carried out the forward section which had made the gap and was covering it, would move on again directly the section commander saw that the rest of the platoon was coming on to back it up, after capturing the enemy post.)

Report the instant a platoon gap is made (*information for co-operation*).

Press forward constantly, but only so long as backed up (*security by formation*).

Note.—If two enemy posts were marked, the alternative Phase 5 can be inserted here as an additional phase.

Phase 8

Cue :—" The battalion objective is gained and the platoon consolidates."

Action	*Lesson learnt*
On reaching the battalion objective the platoon commander signals the platoon to halt on any piece of ground in the immediate vicinity which seems to him to be suitable for defence.	The moment the platoon halts, it is capable of resisting a hostile counter-attack, because of its open *formation of security*.
The section commanders at once dispose their men in positions which afford an effective field of fire and also cover if possible.	Fire (*concentration*) first, cover (*security*) second.
The platoon commander sends back a report to his company commander. He then reconnoitres the position, gets in touch with the neighbouring platoons and alters the positions of his sections where necessary.	*Security by information for co-operation.* Gain the best mutual field of fire (*economic concentration*) combined with the maximum cover from view (*concealment*) and fire (*security*), and so as to fit in with the dispositions of the platoons on his flanks (*co-operation*).
The section commanders then post sentries and stand by ready to dig in or continue the advance.	

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By means of this system we can show the junior commanders and men that in tactics there are no rigid rules, but that there is a flexible framework of essential principles. These will become second nature by constant practice, if we let the men see and understand how to carry out these exercises better at each attempt.

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